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# INTERNATIONAL ACTION TO CONTROL THE SPREAD OF INFECTIOUS DISEASES*

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A conviction that international co-operation for the control of the spread of infectious diseases deserves to be better known among public health workers than it often is—or at least to be appreciated in better proportion—has led me to address you on this subject this afternoon. In effect I would invite you to inquire with me into the progress made by international methods in the post-war years, and what those methods are. It will not, I hope, be too dull or profitless an inquiry.

In recent years we have come almost imperceptibly to increase co-operation with fellow workers in foreign countries and in other parts of the British Empire on almost every technical subject. Whether it is economics, trade, air routes, water problems, athletics, or what you will, we cannot go far before asking ourselves how they manage the matter, say, in America, or in France, or in Italy, or in the Dominions: Do they do things our way? Have they a better or a worse? Are we cutting one another's throats? Are we pulling together or can we pull together to mutual advantage? Health questions are no exception in this respect. The cosmopolitan tradition has always been strong in medicine and in public health. It was long ago embodied in the Red Cross, and we know what that meant in terms of curative treatment for friend and foe alike during the war. Some of my audience will remember how closely mutual action for disease prevention brought the allied forces together at that time; nearly all will have personal knowledge since then of the advancement effected in some health subject or other by consultations in which nationality and race have hardly needed to be thought of.

To take a non-infectious disease, cancer: it was four months ago at Zurich, in German-speaking Switzerland, that I found myself at a busy and well-organized international congress at work on its radiotherapy. The physicists, radiologists, physicians, and surgeons one met there had come not only from Central Europe but from all parts of the earth to do common work and to make friendships. The cause was the thing, and for them put completely into the background the happenings in Austria and in Germany during that historic fortnight between July 20th and August 3rd. It was, in fact, a big cause and an enduring one. If radiotherapy offers our best method of curing many forms of cancer, and if the philanthropists and the health authorities everywhere are to provide it and spend vast sums of money in obtaining it, the proofs must be offered, the methods declared, and the results estimated. The last is no easy task for cancer, where it must be made a condition before expounding results that the treated cases have been followed up for at least five years to ascertain if the patients die or if the cancer has recurred, and it cannot be done at all without a close understanding between the workers on the use of terms and on the practices followed.

None of this, as things are now, is within the compass or resources of the workers in a single nation. The big radiotherapeutic work is being done, in different ways, in a few institutes which are scattered all over the world. The Zurich congress had not met for combat between them, but to learn what each had done and is doing, and, as a preliminary, to secure that all successes and failures are observed and reported so that they can be understood and compared. It is a good topical example of voluntary co-operation on the international side, successful for the same reasons that national congresses like the present are successful—namely, the possession of an essential subject, thorough preparation, and meetings held at reasonable, not too frequent, intervals. A list I have of such voluntary international congresses on health and medical subjects in different countries during the past year exceeds a hundred. One does not want to exaggerate their significance, or to claim that no work is good until it has been talked about in a foreign capital. But the point to be made is that in these days in almost any expert work the element of international consultation is required sooner or later, and that we have come almost imperceptibly to accept its necessity and to welome it.

### International Health Organizations

What I have said so far relates to intercommunication—the international congress is only one method—arranged voluntarily between individual workers of different countries, helped, as they often are, by the authorities which they serve or by world health agencies, of which the Rockefeller Foundation is the chief. But the same tendency towards international consultations and understandings has in recent years been evident in the health work of national Governments, and it must be remembered that now in some countries, such as the U.S.S.R., every medical and every public health activity is State-organized and State-directed. This has largely been brought about, or at least facilitated, by the League of Nations, through its Health Organization. The Covenant of the League contains an article [Art. 23(*f*)] which states:

"Subject to and in accordance with the provisions of international conventions existing or hereafter to be agreed upon, the Members of the League . . .

"(*f*) Will endeavour to take steps in matter of international concern for the prevention and control of disease."

This obligation of States members of the League has from the beginning been taken seriously. The Assembly votes a substantial annual health budget for its Health Organization, which consists of a medical director and a technical health section of the Secretariat, aided by a committee of health experts of different nationalities.



* Address to the Public Health Congress, November 19th, 1934.

During the last twelve years a great variety of public health and medical subjects has been taken up internationally by this Health Organization. This can be illustrated easily from the world map, which recalls in some places missions to countries asking for foreign experience in the organization of their health services (notably the Balkan States and the Republic of China); in other places meetings of experts on particular subjects such as malaria, leprosy, and sleeping sickness, or the "interchange" visits, with which British medical officers of health are especially familiar. To these must be added particular conferences, say, on cancer statistics, or on the standards and definitions to be adopted for serums, vaccines, and vitamins. The League work also includes the powerful aid to knowledge of epidemic diseases in the Far East provided by the Far Eastern Bureau, which it maintains, largely as a result of Japanese initiative, at Singapore, and to which I will allude again in a moment.

I cite this work of the Health Organization at Geneva not so much because of its bearing on my theme this afternoon, which is international control over the introduction of infectious diseases, as for the example it gives of the international collaboration going on in other fields. Most of the Geneva work has had the advantage of new ground to occupy. It is otherwise with international measures for the control of the introduction of infectious diseases, which have behind them some centuries of tradition, and have been the subject of active international or diplomatic interventions from time to time ever since the plague periods of the Middle Ages. Some of these traditions are strong, and in many places continue to govern the national practice. Some, it must be admitted, are, or until quite recently have been, quite out of date when modern knowledge of the causation of epidemics and modern methods of intercommunication are considered.

Here, therefore, progress in reform and rationalization is by no means easy. It cannot be rapid or be dealt with by short cuts. It has, however, been a notable and encouraging progress, which will bear comparison with the newer type of international work. Some of it has been effected through the new machinery of the League, but most is done through the earlier established International Office of Public Health, which was set up in Paris under the Rome Convention in 1907, and has since had various new duties added to it by subsequent international agreements. This body, often better known as the *Office International d'Hygiène Publique*, since its official language is French, has various ties with the Health Organization of the League to avoid overlap, and, if the League of Nations' spirit consists in working for and obtaining international understanding and camaraderie, it works, side by side with the League, fully in that spirit.

### First Public Health Services

Sanitary organization for the defence of frontiers, which at ports meant quarantine services, was among the earliest, if not the first, of the services established in the name of public health. The largest organized State public health service in the world, that of the U.S.A., sprang from frontier defence, and still depends upon it. Our own State medical services were at the beginning deeply concerned with quarantine, and started with the cholera menace of last century. Only the other day a new Government, the National Republic of China, decided to set up an effective port sanitary service as a preliminary to the organization of its internal public health administration.

Owing to modern knowledge we need have far less apprehension than used to be the case of the results of the mere importation into a country of a disease to which we are strangers, and it is unfortunately true that many of the worst infections—influenza, for example—will defy all frontier measures. Our recent tendency with many epidemic and endemic diseases is to rely more on immunization, on specific curative treatment, and on general measures of hygiene, such as the prevention of overcrowding, than upon mere defence against the introduction of, or exposure to, the infection itself. One can conceive, indeed, that by another generation or two frontier defence against infections may almost come to be disregarded in view of other available measures; a time when we could be content, and the public we serve would be content, to disregard even the importation of cases of major smallpox; to accept the arrival of the plague-infected rat, or the dog which may be incubating rabies; to chance the anthrax-infected shaving-brush or the psittacosic parrot—always in confidence that, if these or any other infections come into the country, local action will circumscribe and extinguish them, and local action will suffice.

But if this time is to come, it is not here yet, and I do not see local authorities asking for it. We may not place as much value as we did on protection against exposure to infection, but at least we expect to have that protection provided when it can effectively be exercised. For home administration this is a truism: at home we insist on maintaining disinfection, hospital isolation, and many other measures to keep people from exposure to infection, sometimes even at a greater cost and effort than a strict sense of proportion would warrant. In the case of importations from abroad parallel action must be maintained, and is expected. If defence against the introduction of infections is only one of the measures required, defence there must still be.

Now in the past, and indeed until quite lately, defence was usually the only measure thought of. If you are interested enough to study the literature of what was called the Levantine plague or of cholera diffusion—you will find much of it epitomized by Simon and in the Local Government Board Medical Reports, and more recently by Professor E. W. Hope in his book on *Health at the Gateway*—you will soon appreciate how ruthlessly, from the seventeenth century well into last century, these national self-protective measures were applied.

### Early Port Sanitation

Leaving aside land frontiers, it was common practice at seaports for passengers and crews, sick and healthy together, to be kept in isolation for weeks in the cramped space of the ship at a quarantine anchorage or be herded into lazarets on shore, or for the ship to be incontinently repulsed to any other port in which it could find refuge; or for merchandise to be destroyed wholesale and shipowners ruined because the ship had come from a port where pestilential disease was suspected to exist. It was from this aspect, inhumanity and restraint of commerce, that international agreements about infectious diseases came to be made. The formal International Sanitary Conventions on the subject, which started in 1892, were directed far less towards joint action for controlling the spread of disease than to getting rid of the intolerable administrative position created by the working of the individual national defences. Enormous diplomatic energy was for this purpose expended in the successive pre-war International Sanitary Conventions, up to and including that of 1911, and they were not unsuccessful. They limited the detention of ships and passengers and freed the cargoes. They gave port sanitary authorities a defensible code of action to work upon with medical authority behind it, and helped to make them, at least in this country, the practical bodies they are. But to understand these international agreements you must think of them as being essentially of the nature of armament conventions which limit the range and calibre of the guns per-

mitted, rather than the occasions on which the guns need to be let off.

It has not been an easy task to intrude into this elaborate defence-regulating system new methods of international co-operation directed against the diseases themselves. When dealing with infections every administration has a traditional, as well as a natural, prejudice to rely solely on those measures which are wholly in its own control, while in many countries age-long legislation and practice have been based on the conception of this being the only line that a responsible authority can accept when it has to protect its own nationals.

We have, nevertheless, gone some way on the new lines and found them profitable, using as the chief instruments, first, the remodelling of the International Sanitary Convention effected in 1926, and secondly, the International Health Office at Paris, which has a permanent committee of technical officers representing nearly all the nations of the world, and includes a quarantine commission that regularly keeps the practical application of this important Convention under review.

### Rat-plague Infection After the War

Let me take, as a good example of the change over, the spread of plague by the carriage of plague-infected rats on ships. When port sanitary authorities, old and new, got to normal work after the war they found that the spread of rat-plague infection from port to port by means of shipping had become a rather formidable affair in many parts of the world. When a rat-plague infection was introduced it could, in some circumstances, cause a considerable prevalence of human plague ; even if it did not, the continued presence of epizootic plague among rats in the port had definite dangers and inconveniences, and its existence was naturally considered a reproach to the local sanitary authority and the health administration of the country. Many ports had attacked the position energetically, and they were encouraged to do so by the efficiency with which rats on shipboard could be destroyed by new fumigation processes—notably, by hydrocyanic gas in one form or another. It came about, therefore, that on the basis of individual port defence ships had only to go from, or to have touched at, ports in plague-infected countries for the authorities of the port visited to require them to be submitted to fumigation processes which, besides being costly to the shipowner, were as often as not unjustified by any evidence of the existence of plague-infected rats on the ship.

Now so long as this extreme measure of defence was only adopted in a few ports and on a few sea routes, it was accepted without much protest by shipowners, but when the ship, from the mere fact of having at some time or other during the voyage been at a plague-infected port, had to be fumigated again and again at many subsequent ports, the position became intolerable for the shipping trade, and, once the possibility of international co-operation was admitted, it was impossible to justify it.

### Successful Measures for Its Control

The system which is now adopted is a really co-operative one. If there is actual plague infection on the ship it must, of course, be dealt with at once. But what we have now done is simultaneously to go for the root of the trouble—namely, the ship rat itself. Every six months, according to present international practice, a ship has to be properly overhauled at one of the recognized ports (there are now over 400 of them available throughout the world) to ascertain whether she harbours rats. If the inspection shows that does so, deratization by fumigation or by any other effective means is required. Other ports then recognize what has been done on the production of certificates carried with the ship's papers.

The whole system is regulated by the 1926 Convention itself, and its working is subject to periodical survey at Paris by the Permanent Committee of the International Health Office. It has now been in operation for seven years. Naturally it has not been established without anomalies and hard cases arising, but when they do there is machinery for their investigation and representation to the Government concerned to prevent their repetition. And, in fact, we find such cases get fewer year by year. The system has the full sympathy of shipowners, who now know what is expected of them in this respect, and on their side have come to realize how much can be done on the ship itself to avoid fumigation by making the ship, as it is termed, " rat-proof." A notable example of this tendency was lately furnished by a report, made by the joint committee appointed by the Chamber of Shipping of the United Kingdom and the Liverpool Steamship Owners' Association, where the essentials of rat-proofing are laid down for the guidance of shipbuilders.

That all these measures have enormously diminished the rat-infestation of ships is indubitable. They need to be supplemented, more than at present, by rat-proofing and rat-destruction at certain docks and warehouses, but if both continue as they are doing the object will soon be achieved. Plague will continue in certain regions of the world, but it will no longer be a disease of world diffusion. Its lines of communication will have been effectively cut. I could give you no more striking example of the advantages of combined international action supplementing, or even ultimately superseding, individual national defence.

The same principle has been applied in different ways to other diseases, notably to cholera, which, if it follows its usual epidemic cycles, will require special attention next year. Here we have secured a common recognition by all countries of precautions taken in the cholera-infected country, including anti-cholera vaccination. Of yellow fever I will speak in a moment in connexion with aircraft.

### Variola Minor in England and Wales

I may dwell for a little while on the importation of small-pox, in view of the interest which all local authorities represented here have in dealing with that disease. Let us consider small-pox for a moment from the British end. The two epidemiological types of small-pox, *variola major* and *variola minor*, are now well understood, though both of them remain, and rightly, notified and notifiable under the term " small-pox." In most parts of England, though happily not in Scotland or in Ireland, we have, since 1922, become habituated to local prevalence of variola minor, the kind of small-pox which practically stops with the first characteristic rash, does not go on to the secondary fever or pustulation, leaves little or no pitting, and causes an almost negligible mortality and usually only a brief period of real illness, if any, to the patient. From 1922 to 1933 we had no fewer than 81,061 such cases notified in England and Wales. Regarded simply as small-pox, the number of small-pox cases in this country has been relatively far higher during this period than in any part of the Continent, with the possible exception of Soviet Russia.

Besides this we have the fact that the severe epidemic type of small-pox, variola major, exists and persists in Eastern countries—a notable epidemic of it occurred in Alexandria in the early months of last year—in which none of the characteristics of small-pox which have made that disease so much to be dreaded are absent. There is the heavy toxicity, the severe mortality—I am, of course, referring to persons unprotected by vaccination—the pitting, the scarring, and all the rest. If this infection is imported into this country it breeds true ; in other words, it is the small-pox with which we were only too

well acquainted in 1893 and 1902. That it can do so has been proved by several examples of its importation by persons coming to England or Scotland in the incubation stage, or when the importation has been by cases that were missed at the ports. We are able to deal with such cases before they get much hold on the local population by strict measures of isolation, by surveillance of contacts, and by vaccination. The success of our practice in this respect, thanks to our system of central intelligence and the vigilance of local authorities, is well known and needs no restatement; I find that it constantly brings us credit when described to my colleagues of other countries. But it is a formidable and costly business for local authorities. The importation ought not to happen, if it can possibly be avoided.

This being the case, we have had, during recent years, to ask two things of the health administrations of other countries. The first was that they should recognize our epidemic variola minor, a differentiation on which we ourselves took—and needed—some time before we could make up our own minds. If you put yourselves in the position of the European countries you will realize that they, with no experience of variola minor, required some convincing. Apart from Switzerland, which had had an experience of the mild epidemic type of small-pox very close to our own, the Continental countries knew small-pox only in its classic or major epidemic form, and knew it from fairly frequent importations—in France, for instance, from her African possessions. When these importations took place and epidemics of small-pox occurred the health authorities applied drastic measures for their extinction, including obligatory vaccination of persons in the infected regions or entering other regions from infected areas. They had every right, confirmed by the text of the international agreements, to treat in the same way arrivals from a foreign country in which small-pox was epidemic. These arrivals should satisfy them of their immunity by producing evidence of recent vaccination, or should be vaccinated.

### Episode of the Ship "Tuscania"

Even as late as 1929 the question came to a head by the episode of the ship *Tuscania*, which many of you may remember. For reasons I need not go into, the *Tuscania* landed at British ports forty-five persons actually incubating small-pox of the major type, who developed the disease in this country, nine of them dying from it. Our system of notification of contacts and surveillance was so good that no more than six secondary cases occurred; in other words, the whole group of variola major cases in the country only totalled fifty-three, all duly isolated and controlled. But the incident had become good newspaper copy all over the world, and at once the fact of our ordinarily having at the time a hundred or more notified cases of small-pox in England every week was mixed up with it. Variola minor was taken as a mere term of camouflage. England was a country in which small-pox was epidemic, and vaccination and other measures must be applied to those coming from it. For a while this was the view taken at French ports, and much inconvenience resulted until the situation was cleared up.

As a digression, I may say here that this foreign action had nothing to do with the English Vaccination Acts. It would not have mattered whether those Acts had or had not a conscience clause, or did not exist at all. The English Vaccination Acts, so far as they apply compulsion, relate only to the vaccination of infants. What the foreign countries were concerned with was the vaccination of the travelling adult. The international understanding on this point is that it is only vaccination within three years which counts in the case of arrivals from a small-pox-infected area. It is perhaps as well to point this out, as the question of "international reprisals" has, I think without sufficient warrant, been introduced into some of the discussions about our own vaccination legislation.

### Recognition of Two Epidemic Types of Small-pox

Apart from the *Tuscania* incident, no inhibitions have been imposed abroad upon travellers from England on account of the considerable small-pox prevalence of recent years, and another *Tuscania* incident now would not have the same consequences. The characteristics of our variola minor are now well understood in all responsible quarters, and this has been brought about in large measure by the system of international co-operation which the Post Office provides. If you have your facts, and can bring them twice a year before a committee of critical official technical representatives of every country interested, and can reply to their questions and get their experience, the administrative position is bound ultimately to clear, at least if you have enough persistence. In this case the Permanent Committee of the Office International d'Hygiène Publique, beginning with many doubts and hesitations on the question of stability of epidemic type, collected, session by session, the facts of past epidemics—for example, in Australia—and of the actual distribution of small-pox at the time. Though Europe was not generally familiar with it, extensive epidemics parallel to our own were going on in the United States and elsewhere, persistently mild in clinical type, of lower power of spread, and tending to natural extinction after three or four years of local prevalence. There emerged a mass of evidence, well put together for us by the delegate for Portugal, Professor Ricardo Jorge, on which the differentiation of the two epidemic types, major and minor, could be accepted both for scientific and, if need be, for administrative purposes. With this authority the two terms were embodied in the last *International Nomenclature* of causes of death, as also in the last official *Nomenclature of Diseases* issued by the Royal College of Physicians of London. They now govern the national precautions which we decide to take, and we know where we are.

If I have dwelt on variola over-long it is because of the advantage of presenting you with a good concrete example to show how one side of the international work is done.

### Work on Other Infectious Diseases

The same system is habitually applied to other infectious diseases where the great necessity is to have prolonged international epidemiological study. It is in this way that the Permanent Committee of the Paris Office dealt with the discovery of that rare condition called *post-vaccinal encephalitis*. It was as invaluable to Holland and to two or three other countries as it was to ourselves to pool experience with a view to determining the circumstances of age, vaccination, etc., which were associated with this newly understood complication of vaccination. You will find abundant evidence of the practical use made of these studies in the reports of the English Departmental Committee on Vaccination.

The occurrences a few years ago, in several countries, of a virus disease contracted from parrots received similar international study with great advantage, since we were not only able to collect information bearing on the origin and causes of *psittacosis*, but also to settle between ourselves the advice which should be given to our Governments regarding the exclusion of parrots or attempts to control their importation. No one country wanted to be the dumping-ground of parrots which other countries refused to take. So also with *undulant fever*, which used to be called Malta or Mediterranean fever, as soon as it was ascertained that it could be prevalent in Northern

Europe. The warning of its prevalence in Scandinavian countries, brought to the table in Paris, led to inquiries here by the Ministry of Health, on which much of our present understanding and recommendations about this disease have been based. I could continue the list, mentioning particularly *cerebro-spinal meningitis*, on which information about prevention or treatment comes up to the Paris sessions year by year, and gives each of the delegates something new to take back and work upon. All inquiries of this kind ultimately appear in the *Monthly Bulletin* of the Office International d'Hygiène Publique, which represents one of the most solid contributions to the science of epidemiology which we possess to-day.

### An International Intelligence System

To illustrate another side of the international work I go back to small-pox and to the second English requirement—namely, to keep down importation of small-pox from countries where the severe type is prevalent. Here we have to encourage all measures taken in small-pox-infected countries to prevent the embarkation of infected persons, and to know if particular ships are likely to be carrying small-pox cases or contacts, without complicating our administration with a mass of unnecessary inquiries at the port of entry, or, subsequently, in all parts of the country in order to keep particular individuals under daily observation until the incubation period is up.

For this day-to-day administration a system of international intelligence is essential. The work done here goes on independently of the six-monthly discussions in Paris which I have just described. We are dealing with intelligence about epidemic occurrences rather than with epidemiology. Under the terms of the International Sanitary Convention, 1926, the occurrence of new outbreaks of small-pox, cholera, plague, typhus, and yellow fever in different parts of the world is to be made known at once to the different health administrations, and followed by information about their progress. For this purpose the Convention provides for immediate notifications to the International Health Office in Paris, which transmits them to the various Governments concerned. By a further provision of that Convention Paris is able to work regionally in this matter, for a large part of the East, through the Far Eastern Bureau of the League of Nations at Singapore; for the Near East, through the Quarantine Board of Egypt; and for the Americas, through the Pan-American Sanitary Bureau.

As compared with the conditions which obtained before the 1926 Convention, the results are certainly satisfactory. The countries for which we have still to depend wholly on consular information are few. For countries as a whole it can be said that neither with small-pox nor with other diseases dealt with in the Convention is there anywhere any notable inclination to withhold information or to delay its transmission. Telegraphic codes and wireless messages, including wireless telephoning, are freely used. Indeed, if any reproach can be brought against this service it is usually either for an excess of activity in sending telegraphic or wireless messages about occurrences which, except possibly to their immediate neighbours, can have no administrative interest in other parts of the world, or when, in addition to transmitting the official communications received from the health departments, some of the international bodies add their own commentaries.

To meet these objections the Paris office has lately done a good deal to encourage direct local communications between neighbouring countries and from port to port. A recent agreement has been made, for example, to cover all the North Sea area, by which port medical officers of the different countries, including the United Kingdom, communicate direct with their opposite numbers abroad where any special risk has been noted. Again, we have special arrangements with the Suez Canal health authorities and with Marseilles about small-pox on ships bound for English ports.

I mention these details only as an indication that the intelligence system which now obtains, effective as it is, always requires attention. No doubt there will be some revision and simplification of it when another international sanitary conference is held. The important point now, however, is that as a whole it is working very well and producing the results desired. In this it affords a striking contrast to previous methods. In the earlier years, when we worked not on co-operation but on the system of regulating our mutual defence against one another, everything depended on the declaration of ports as "infected," and such declarations were often made in a most arbitrary fashion. The label was put on and taken off often for quite unsubstantial reasons, and there was every inducement to avoid having it put on at all. It was not until 1926 that the international convention explicitly stated that information about the occurrences of infection at a foreign port was merely to be taken as a guide to the extent of inspection or inquiry necessary on the arrival of the ship, and that it was the condition of the vessel itself which should determine the quarantine measures taken.

### Present Position Concerning "Bills of Health"

So, too, this co-operative international system of intelligence about epidemics has removed almost the last vestige of reason for the traditional document carried by the ship called the "bill of health." The bill of health records that a particular port has been free or otherwise from pestilential diseases at the time the ship was there, and every owner and ship's captain has been brought up to consider it as one of the most important of the ship's papers which they have to produce.

Dating as it does from the period when no country would be satisfied with statements from another without confirmation from its own representative, these bills of health have to be seen, stamped, and viséd by the consul of the country which the ship is going to visit. This does not apply merely to the original port of departure of the ship, but to every other port at which it calls and in relation to every port at which it proposes to call. The delay in the ship's time and the cost of the bills and fees are very considerable. The practice was so consecrated by centuries of use that it had never been assailed in any international sanitary convention before that of 1926, when, for the first time, an article was inserted by which the signatory Governments undertook to take any practicable measures to dispense with the consular visa and ultimately with the bill of health itself. The article was by no means a strong one, but the Office International d'Hygiène Publique has kept it to the forefront by efforts to secure local agreement between different nationalities on the subject.

Lately, in the *British Medical Journal*, attention has been forcibly drawn to the inconveniences of the system, to use no stronger term, by a ship surgeon, who quoted some extreme instances of the waste of time and money it involved. I trust that with patience—for it requires patience to deal with deep-rooted sea traditions—their number can soon be diminished. Governments have now before them an international agreement for dispensing either with visas or bills of health, or both, for ships of their respective nationalities, and there is every reason to believe that this agreement will receive the adhesion of most of the important maritime countries of the world. Here it is the shipowners who stand to benefit, and one may expect them to do all they can themselves to support the efforts which the hygienists are making to get rid of proceedings taken in the name of health but bringing no advantage to it.

### Importation by Aircraft

Lastly, I must add a few words about the importation of infectious diseases by aircraft, since, with any sort of vision, we must appreciate a growth of air routes and air lines which will make them as ordinary and as much used for travel from distant countries as sea and land routes. Already the world air routes are considerable, although the total number of passengers carried is but a small fraction of the whole. Already we have had demonstration that they can carry infections, and that passengers from one non-malarious country to another can contract malaria in course of an ordinary air journey from the bites of infected mosquitos on the aircraft.

Air flights are so short in time that they mock at incubation periods, and rarely allow initial symptoms to occur before the aircraft reaches its destination. If the notion is now out of date and usually futile of putting passengers by sea, and the ship they go in, under special observation for no other reason than that the ship has touched at a seaport labelled as "infected," how much more futile is it when applied to airports! Blindly following precedent, some countries have, in fact, demanded that the commander of the aeroplane must, as a condition of landing his passengers or crew, produce bills of health, attested in each instance by the appropriate consuls, to show that every place of embarkation on the air route was free from plague, cholera, or other maladies. How seldom could this procedure ever be a guide to the discovery of dangerous persons or infected articles? The whole matter has had to be taken on a wider basis, with all the help that the Air Ministries and air lines, and particularly the International Commission of Air Navigation, could give us, and with separate consideration of the natural history of each disease with which we were able to deal. If for us in this country Eastern small-pox is the chief importation to be guarded against, in the tropical and subtropical parts of the world, where the *Stegomyia* mosquito is common, it is yellow fever. This disease now could easily be imported through air traffic by infected persons or insects into countries where yellow fever would have all the opportunities of spread possessed by a new disease which is introduced into highly susceptible populations.

### A Sanitary Code in Aerial Navigation

The International Sanitary Convention for Aerial Navigation, signed at The Hague last year, was hammered out at the International Office of Public Health in order to meet all the chief contingencies of transmissible and preventable infections, and to provide an international code of conduct—on the one hand something practicable and reasonable from the side of air traffic, and on the other something which, when it had to be applied, would offer a substantial security without illusory formalities. This convention deals, naturally, with the action to be taken if infectious diseases occur on aircraft, and with those insanitary conditions *en route* which require an international understanding to deal with—for example, the throwing out of excreta.

The guiding rules for special diseases are particularly detailed in the case of yellow fever, and have been drawn up with the aid of the experience of America as well as of Africa. In regard to the detection of persons arriving in an infectious state from any disease, we have two key positions. The first is that the airports open to arrivals from other countries are, for political and customs reasons, few. It is thus not difficult or costly to see that they are provided with the necessary nucleus medical service, able to deal with an infectious case, and with access to hospital and laboratory; able to supervise the health of the personnel of the aerodrome and its cleanliness; able also, when circumstances require, to make necessary interrogations regarding the recent movements of particular persons coming from distant countries and exposed to particular infection, and so to secure the same surveillance of them in the places on land to which they go as would be imposed if they had arrived at a seaport.

In this country the co-operation of the local authorities and medical officers concerned has already been secured for this purpose. The second key position, without which the first would be useless, is the existence of the international intelligence system about the chief preventable diseases which I have already described. Without it no rational or tolerable system could have been devised; with it we may reasonably hope that the agreement is one which will help and not hinder both the national health authorities and the interests of air passengers and air lines.

The wide acceptance it has already received, and the advantage which it has even at this early stage been shown to possess in dealing with yellow fever in Africa, are good auguries for the success of the Convention. Of course, where conditions change so rapidly as they do with air travel, no code of conduct can be expected to be complete once for all; the Convention itself contains provisions for its amendment as the result of experience, and its working is already being reviewed regularly by the Permanent Committee of the Office International d'Hygiène Publique, which reports on it to all the Governments concerned.

### Co-operation of British Public Health Officers

If time permitted I should have been glad to add details of the International Agreement of Brussels providing for treatment of venereal diseases in seaports; as it is, I mention it in passing as an important section omitted. I trust, however, that even with this omission I have not selected the examples so badly that a representative audience of British local authorities and medical officers of health will think of my subject as too remote from their own practical work. I cannot think it is so; the daily work of public health departments and their officers on the prevention of communicable diseases cannot help being affected by the results of these regular international studies and pooling of experience. In this matter what I have said about small-pox, plague, undulant fever, or psittacosis would apply to many other diseases. If the results are not brought to public health officers directly, through the *Bulletin Mensuel* of the International Health Office, or through the *Quarterly Journal* of the Health Organization of the League of Nations, their lessons are considered and incorporated in circulars and reports from the Ministry of Health or other central Departments, and presently come into the stock of the accepted technical knowledge on which our health authorities work, whether they are central or local.

Local authorities and public health officers sometimes can help the work materially. It may be that, as in a recent international inquiry about disinfection, in which the medical officers of health of several of our larger local authorities were good enough to participate, the information to be had from other countries in return for the trouble of answering an interrogatory sometimes is not, and could hardly be expected to be, of much use to ourselves. But often the boot may be on the other leg, and I venture to express the hope that when information is asked of local authorities for international health purposes it will never be grudged. There is much to take as well as give.

### Results Obtained without International Dictation

If you ask me to go further and end by specifying in some conveniently quotable figures what this international system has saved the country in the way of avoiding importations of infectious diseases, I fear I must be disappointing. It is impossible to estimate events which have not occurred. Even if it were attempted the increased individual efforts and efficiency of our own port sanitary authorities in recent years, as well as changes in epidemic characterization, would have to be weighed in with the international factor, and responsibility apportioned between the three. But at least the extreme rarity of these importations, notwithstanding modern facilities of communication, when contrasted with the experiences of the end of the last century and the pre-war period, in which we relied almost wholly on our own "defence" measures, is some testimony to the value of the willing international co-operation I have outlined. I would insist on its willingness; in my experience the best work has been done by avoiding any semblance of international expert dictation, any suggestion of international inspection, or any interference with national administration. It has been achieved by working steadily for conferences and agreements between responsible health officers throughout the world, determined to help one another to carry out their respective national duties.

## THE TREATMENT OF ADOLESCENT KYPHOSIS *

BY

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The danger against which the orthopaedic surgeon must fight in adolescent kyphosis is the spontaneous formation of compensatory lordoses in the cervical and lumbar regions. This is true of all types of the deformity, whether due to late rickets, sometimes called "kyphotic disease" and characterized by an osteomalacia of the dorsal vertebrae with a poor general state of health, a type that may be called "somatic kyphosis"; or whether it is the painful adolescent kyphosis, which is a special disease of indeterminate nature, regarded by some (Schmorl and his pupils) as connected with a subcartilaginous nuclear hernia, by others (Schauerbach, Sorrel, and Delahaye) as with epiphyseal trouble, and by others again (Calvé, Galland, Meyer, etc.) as connected with nuclear hernia combined with epiphysitis—a kyphosis of disk origin as opposed to the preceding type. This orthopaedic principle applies whether the kyphosis is capable of being actively and passively reduced—that is to say, a kyphosis due to bad posture—or whether it is irreducible with a certain number of dorsal vertebrae attacked by definite lesions, forming, as in Pott's disease, an actual focus. The aim of this short paper is to show why, in adolescent kyphosis, spontaneous lordoses form: why they are harmful; how they can be avoided; and by what they should be replaced. First of all it is necessary to recall several essential points in the normal and pathological physiology of the spine.

### Movements of Flexion and Extension of the Normal Vertebral Column

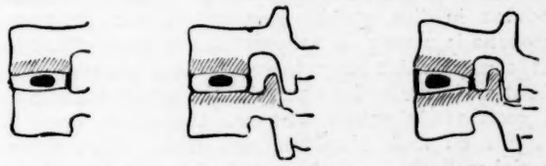
Ignoring, for the moment, lateral, rotary, and twisting movements, the vertebral column can be divided into (1) regions of hyperextension, and (2) regions of flexion.

* A communication to the Section of Orthopaedics at the Annual Meeting of the British Medical Association, Bournemouth, 1934.

There are two regions of hyperextension: the cervico-dorsal, and the dorso-lumbar and lumbar region. As shown in the attached diagrams, the cervical spine with the three first dorsal vertebrae form the principal region of hyperextension—that is, a region in which the vertebrae as a whole allow quite a pronounced movement of hyperextension, very pronounced in certain persons who can touch the upper dorsal spine with their occiput. On the other hand, this region allows little or no range of flexion. The dorso-lumbar and lumbar region includes the ninth, tenth, eleventh, and twelfth dorsal, and the first, second, third, fourth, and fifth lumbar. Movements of hyperextension are highly developed here, and, in supple persons, when the trunk is bent backwards the head can be placed between the heels.

(1) Maximum of flexion. (2) Intermediary position. (3) Maximum of extension.

FIG. 1.—Normal physiology of the dorsal vertebrae. Region of flexion: (*a*) a certain degree of flexion is possible; (*b*) impossibility of extension.



(1) Maximum of flexion. (2) Intermediary position. (3) Maximum of extension.

FIG. 2.—Normal physiology of the lumbar vertebrae. Region of extension: (*a*) a certain degree of hyperextension possible; (*b*) with possibility of flexion.

The regions of flexion are the suboccipital and the dorsal. The movements of flexion which occur at the occipito-atloidian articulation should be considered separately from the rest of the vertebral physiology. They are, moreover, very limited, and play no part in the subject with which we are dealing. There remains the dorsal region, the seat of most of the movements of flexion of the vertebral column in its entirety. There are no movements of hyperextension.

### The Disk and the Nucleus Pulposus in Flexion and Extension

This matter, which I have discussed elsewhere, has been the object of some very important research in Germany—research that is very well described in a recent work (Mauric: *The Intervertebral Disk*). It must be remembered that the disk acts as: (1) a nuclear axis through its gelatinous centre—the "nucleus pulposus" (Luschka); and (2) as a true anterior and posterior check ligament through the fibrous ring which connects the intervertebral disk with the overlying and underlying vertebrae (see diagram).

In the regions capable of flexion (mid-dorsal) the nucleus is situated at the junction of the posterior and middle thirds of the disk. The movement of flexion pinches the disk in front and pushes the nucleus backwards to a very slight degree. If the reverse movement is attempted—that is, an effort is made to stretch a dorsal intervertebral disk in front and pinch it behind—failure results. It seems as if, on the one hand, the anterior margin of the fibrous ring acts as a check, and on the other, the somewhat posterior situation of the nucleus in this region prevents the compression of the disk behind. Movement is thus blocked in a position in which the

surfaces of the overlying and underlying vertebrae are parallel. By contrast, in the regions capable of hyperextension, the nucleus pulposus is situated further forward ; it generally occupies the middle third of the disk. The disk can be stretched in front and pinched behind. This movement of anterior stretching is especially pronounced in the lumbar vertebrae. If, however, an attempt is made to destroy the parallelism by flexion —that is to say, to stretch the posterior part of the disk— this cannot normally be achieved. The posterior part of the disk acts as a check.

We must remember that this physiology, so to speak, of the vertebral column exists only in childhood, adolescence, and the early years of adult life. Premature senility of the disk, and especially of the nucleus pulposus, appears towards the age of 30, and is generally definitive at the age of 40.

What occurs in the upright position? The normal attitude is such that the line of gravity should fall in the middle of the base of support. The upright position is characterized by a slight cervico-dorsal lordosis, a slight dorsal kyphosis, and a slight dorso-lumbar and lumbar lordosis.

### Pathological Physiology of the Vertebral Column

From what has just been said about the normal attitude of man in the upright position, it can be seen that kyphosis is merely an exaggeration of the natural curves. All causes which may increase these curves will bring about a kyphosis—for example, the occupational kyphosis of certain adolescents who are obliged to carry heavy weights on their shoulders and head. Here there is a special malleability of the vertebral bodies (dorsal rickets), which, destroying the equilibrium between the weight and the resistance of the vertebral bodies, constitutes a new cause of kyphosis. Every destructive or pathological modification of the dorsal vertebrae will be a new cause of kyphosis (the painful kyphosis of adolescents, cuneiform deformities of the vertebrae, etc.).

Another cause, which I mean to discuss more fully in a subsequent work, would seem to be a congenital predisposition to kyphosis, and, in my opinion, enough stress has not been laid on this point. This is the abnormal and posterior position of the nucleus pulposus in certain young people. We know that the nucleus pulposus is merely the remnant of the notochord. It is easy to imagine that, in certain cases, this notochord occupies a more posterior plane than is normal.

Be that as it may, a physiological kyphosis is followed by a pathological one. The posterior convexity of the back increases and becomes a prominence. In order that the upright position may still be possible, in spite of this deformity—that is to say, in order that the line of gravity should continue to fall in the middle of the base of support —compensatory cervical and lumbar lordoses immediately and spontaneously occur in the regions which are normally capable of hyperextension.

### Why are Cervical and Lumbar Lordoses Objectionable?

In the first place, they are ugly. The neck becomes short, the abdomen prominent, and the dorsal prominence accentuated ; this is the hunchback type. Secondly, they are harmful for two reasons : (*a*) under the effect of weight they become more and more accentuated, and, in consequence, tend to bring about a progressive increase of the kyphotic prominence ; (*b*) a prominence is formed, not only of diseased or deformed vertebrae, but of sound vertebrae, a condition comparable with that of Pott's disease, where, even with a limited focus, healthy vertebrae help to form the gibbus as much in the upper segment as in the lower segment of the latter.

In the third place, when the compensatory lordoses become very accentuated, and this is found particularly in the lumbar region, a considerable expansion of the disks in front takes place, with a true propulsion of the nucleus into the anterior third of the disk. In this position the nucleus acts as a wedge, and blocks the overlying and underlying vertebrae. In this extreme position it prevents a return to the normal. Finally, these lordoses, which fix the vertebral column permanently into a bad posture, sooner or later become the seat of more or less tolerable pain. Every orthopaedic surgeon knows that kyphotics suffer more pain in the lumbar region than in the dorsal.

### How can Spontaneous Cervical and Lumbar Lordoses be Avoided and Replaced?

In other words, how can a patient with kyphosis, when he is cured, be given an upright position consistent with the static laws—that is, so that the line of gravity always falls in the middle of the base of support and with a minimum of deformity? The same problem occurs in dorsal Pott's disease ; for the spontaneous and natural cervical and lumbar lordoses there must be substituted

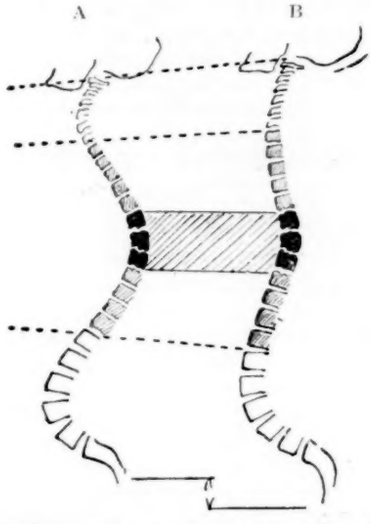



Fig. 3.—A, Spontaneous and wrong compensation of kyphosis by cervical and lumbar lordosis. B, In the same degree of kyphosis artificial and correct compensation by therapeutic curves produced immediately above and below the kyphosis.

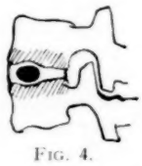


Fig. 4.

Fig. 5.

Fig. 4.—Irreducible lumbar lordosis.
Fig. 5.—Modified physiology of the dorsal vertebrae after progressive adaptation, needing time and care.

therapeutic compensatory curves situated immediately above and below the kyphos. To obtain therapeutic lordoses the normal physiology of the dorsal vertebrae must be modified ; movements of hyperextension must be brought about at the level of each sound disk

This involves a work of repair and adaptation which needs time and care. Two procedures are employed. (1) The Minerva plaster jacket and recumbency in an outstretched position and in complete hyperextension. This plaster apparatus, made with the whole spine in extension, blocks the body in such a position that the physiological, cervical, and lumbar lordoses are suppressed and can no longer occur. It is enough then to make a large window at the level of the kyphotic region, and

exercise a slow and progressive correction with the aid of a compression pad, to achieve the desired result in a more or less lengthy space of time. (2) Correction in horizontal recumbency and a hyperextended position. A cast of the shape described by the attached figure can be used, or—and I prefer this procedure—the plaster bed. Whichever procedure is adopted the position of the recumbent patient is such that the lumbar lordosis is completely suppressed, and in the segment of the upper vertebral column, at the apex of the kyphotic deformity, a permanent and progressive straightening force is exercised under the influence of the weight of the upper part of the trunk and head. The action thus taking place can be compared to a permanent pressure on the shoulders.

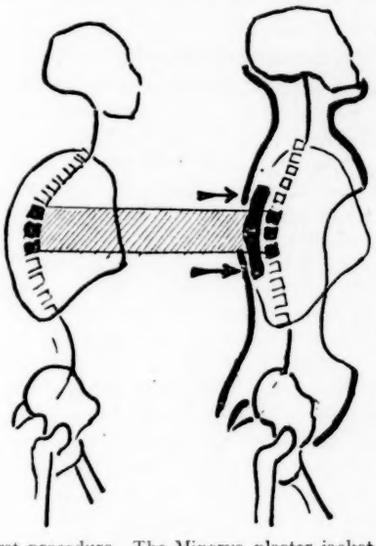


FIG. 6.—First procedure. The Minerva plaster jacket with window at the level of the kyphosis. Progressive correction with the aid of compression pad (cotton or felt). Impossibility of cervical or lumbar lordosis.

FIG. 7.—Second procedure (the better). Correction in horizontal recumbency and in a hyperextended position. No cervical and no lumbar lordosis. At the same time, and in this position, massages and exercises are carried out.

In my opinion the second method only should be used in an adolescent kyphosis. It permits a number of orthopaedic measures which are indispensable for these patients—that is, in the recumbent position many gymnastic and massage movements can be carried out which develop the muscular system of the young patient, and little by little endow him with a solid muscular corset, which will allow him to maintain the correction when it is obtained. In horizontal recumbency the action of the kyphotic forces is destroyed, and the principal one—weight—becomes, on the contrary, a valuable help.

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M. TSURUMI (*Bull. Off. Internat. d'Hyg. Publique*, October, 1934) states that in June, 1933, antityphoid inoculation by mouth was carried out on 32,130 persons in the prefecture of Saitana, near Tokyo, while 45,790 persons in ten other towns served as controls. Up to the end of December, 1933, six cases of typhoid fever occurred among the inoculated as compared with thirty-nine among the controls. One of the six persons fell ill six days after inoculation, which therefore took place during the incubation stage, so that there were really only five cases among the inoculated and forty among the controls.

# ALLERGY, METABOLISM, AND THE AUTONOMIC NERVOUS SYSTEM

BY

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My object here is to give you what I consider should be a clinical conception of allergy. In previous papers[1 2 3] I have led up to this conception. First of all allergy should be distinguished from infection and its reactions. One big difference clinically is that allergic manifestations tend to be afebrile and evanescent, and infectious illnesses febrile and of slower subsidence. Allergy arises from processes which, though initiated by foreign proteins, are primarily metabolic, internal, and autonomic in nature. Infectious illnesses arise from reactions to the foreign invading toxins of bacteria. Allergy must not be confused with immunity. Clinically the first is an irritative and the second a protective phenomenon. Rich[4] has shown experimentally and quite clearly that hypersensitiveness to bacterial allergens and immunity to the same bacteria can be separated: when the serum of allergic immune animals is injected into normal ones the immunity is transferred, but not the hypersensitiveness.

Bacterial allergy may be connected with infection in that individuals may be infected and become sensitive to the proteins from the bacteria in some septic focus in their own bodies, but this reaction is an irritation phenomenon, and is not necessarily related to immunity. An infant *in utero* may conceivably be sensitized, and is often prepared for sensitization by irritating body fluids from the mother. It can also be given a temporary immunity by the stimulating effect of body fluids from the same source. In the first case, however, the infant inherits the peculiar type of internal metabolism that can be irritated into sensitization, while in the second it receives a transferred acquirement which is only temporary and which depends on the chance of the mother's illnesses and their effect on her body fluids. Allergy, then, is internal and due to peculiarities in the individual endowment; infection and acquired immunity are foreign and fortuitous.

## Inheritance

That heredity plays an important part in relation to allergy is shown by family histories and by the early age at which the symptoms become evident.

*Case 1.*—A baby of 8 months had curd dyspepsia with chronic diarrhoea, urticaria, and seborrhoeic eczema. The mother and the grandmother had had asthma, and there was also a history of eczema in the same branch of the family.

*Case 2.*—In another family the mother has eczema and a tendency to rashes with cineraria flowers. Of eight children one has hay fever, another urticaria, and a third asthma. The last baby has eczema, and was allergic to the mother's milk, and the penultimate child had eczema and developed asthma as the eczema disappeared.

*Case 3.*—In one family of ten children one had milk dyspepsia, two eczema, one croup, one asthma, and one serum sickness. Of the children of the last individual one had asthma, eczema, and urticaria, and the other angioneurotic oedema. One of the children of the asthmatic had asthma.

The following three histories show that in addition to inheriting a tendency to allergic manifestations a child may inherit a sensitive metabolism.

*Case 4.*—A baby aged 8 months had eczema, and had had acidosis three months before. There had been milk dyspepsia, and the child had decided digestive disturbances if given cod-liver oil or orange juice.

*Case 5.*—Another child, aged 7 years, had mucous colitis, urticaria, acidosis, and a tendency to catarrh and sneezing. Oatmeal, malt, and milk all very definitely upset her digestion, causing furred tongue and loss of appetite. Her father had asthma, her mother eczema, and her sister eczema.

*Case 6.*—In another family the father has eczema and asthma. Three older children have asthma. The penultimate baby had eczema, asthmatic wheezing, milk dyspepsia, and intolerance to cod-liver oil. The last baby was, I believe, saved from eczema because we kept the mother largely off milk fats during pregnancy, and also during lactation, which was successfully carried out for nine months.

### Relation of Allergy to Metabolism and the Autonomic Nervous System

The above histories, which could easily be multiplied, show that individuals may inherit a metabolism that may become overloaded and insecure, and thus irritate another endowment—a sensitive autonomic nervous system.

The composition of body fluids is dependent upon efficient metabolism. Disturbed metabolism may give deficiencies or cause the presence of irritating bodies; hereditary tendencies may assist in producing such conditions. Hypochlorhydria, deficiencies of liver action,[3] chronic maldigestion of fat with excess of fatty acids, abnormalities in water absorption and retention, and defects in protein metabolism may all occur. The breaking down of absorbed protein and its rebuilding into the special protein of the individual may be upset in allergic persons. Colloidoclasia occurs, and histamine is liberated, giving rise to allergic reactions, the skin and the mucous membranes being the areas in which histamine is most likely to be set free. The nervous tissues, especially the more sensitive ones, may be undernourished or irritated by abnormal body fluids: we have the examples of calcium deficiency and spasmophilia. Amino-acids and other toxic bodies circulating in tissue fluids can irritate nerve cells—including those of the autonomic nervous system. This system is closely related to the ebb and flow of tissue fluids, to changes of blood pressure, to secretory activity of glands—especially the endocrine—to contraction of tubes as found in asthma and peristalsis, to skin alterations such as flushing, paling, sweating, and oedema, and to expression of the emotions such as laughing, crying, elation, and depression.

I have previously said[2] that we ought to distinguish allergic disturbances from infections because they are chemical, metabolic, and internal rather than external and fortuitous. If we make this distinction, and if we realize the importance of the part played by the autonomic nervous system, we can understand the reasons for the following happenings, which so often puzzle our infection-educated minds.

Allergic symptoms come and go suddenly. Only an autonomic nervous system disturbance can explain the sudden appearance of a localized collection of fluid, as there is in angioneurotic oedema, or the sudden advent of spasm and distress, as in asthma. The disappearance of symptoms may be equally rapid. The remarkably quick action of some of the remedies used for the treatment of allergic symptoms can be explained by their effect on the autonomic nervous system. Allergic symptoms are interchangeable. Eczema may be relieved by the appearance of asthma, or vice versa, or asthma may be relieved by the appearance of another allergic symptom such as colitis.

Purely allergic symptoms are usually afebrile, in striking contrast to the high temperature reactions of infective illnesses. This comparative absence of temperature reactions indicates metabolic changes of a different nature from those produced in infections, and the greater part played by nervous influences in the production of allergy. If an acute infection takes place metabolism is disturbed and allergic symptoms usually disappear temporarily; they may also disappear when a depletory condition such as diarrhoea arises. If a child is taken into a hospital or nursing home where physical and mental stress are lessened, and also the likelihood of unsuitable diet, the allergic symptoms tend to disappear because the autonomic nervous system is soothed and is not likely to be irritated by faulty products of metabolism.

When there has been constant repetition of allergic symptoms it is found that very little provocation, sometimes only psychical, is needed to produce the manifestations. This shows that there is a tendency to the development of a system habit, and one which undoubtedly can be referred to the autonomic nervous system and to metabolism.

### Autophiliac and Autopathic Individuals

These reasonings, showing as they do the internal and autonomic origin of allergic manifestations, have led me to suggest a new name[3] for the individuals who inherit a tendency to allergic manifestation. I call them "autophils," because they have an insecure internal metabolism and a sensitive autonomic nervous system; if they have developed allergic symptoms I call them "autopaths." We have parallel words in spasmophil and hydrophil, and in neuropath and psychopath. Such words may not be strictly philological, but they are useful.

The following description of autophils is based on an experience limited to children and incidentally to their parents. Autophils are pallid but not necessarily anaemic; they flush and pale easily, and may have motion sickness. They faint on little provocation, such as the sight of blood. They have intense emotional reactions, and the mental stress so produced reacts on their physical well-being; after periods of stress and strain they show dark circles under the eyes. They are generally of the lean schizoid type, though this may not be evident in infancy. In metabolism they are katabolic rather than anabolic in that they tend to eat largely and to use up what they eat rather than to store it. Their appetites are good at first, but in adverse mental and physical conditions the tendency is to overload metabolism, thus producing furred tongue, loss of appetite, constipation, rough patches on the skin, and intermittent deposits of urates.

It is a striking point that in many of these cases milk fats, rich vitamin preparations, cod-liver oil, bananas, and citrus fruits may not agree, and, if forced upon them, may help materially to overload the internal metabolism. Bracing climates and east winds may have a similar adverse effect. It is probable also that the overloading of metabolism produces a lowered resistance to infections and a proneness to catarrh and glandular enlargements. A vicious circle is thus caused, because catarrh once established in nasal, bronchial, or intestinal areas may encourage defective metabolism. Further, if sensitization to the special proteins produced by the bacteria has arisen, sensitization phenomena may follow any exacerbation of chronic infection.

Mentally, autophils are emotional, sensitive, excitable, and keenly interested. Mental stress may lead to irritability, moodiness, worrying, meticulousness, or other similar signs of nervous overstrain. They are inclined to be introspective and of the type of person who, in later life, develops neurasthenia.

### Autopaths

Sensitization occurs either from the shock of one large dose or from a more prolonged provocation by small doses, and I wish to point out that overloading metabolism has a distinct contributory effect in the production

of sensitization. An autophil who has been overloaded by defective metabolism is likely to develop allergy, but one who has not been so overloaded will probably remain healthy. Once overloaded or sensitized, autopaths are liable to recurring attacks of seborrhoea, erythema, urticaria, angioneurotic oedema, eczema, ulcers in the mouth, milk dyspepsia in infancy, geographical tongue, bilious attacks, cyclical vomiting, colitis, spastic colon, croup in infancy, hay fever, asthma, migraine, convulsions, orthostatic albuminuria, haemoglobinuria, and arthritic signs.

### Management of Autophils

Autophils to avoid becoming autopaths should always live within their limits of physical and mental endurance, and should avoid sensitization. Overloading of metabolism from faults of assimilation or from waste products may be brought about by faults in diet, injudicious exercise, too much excitement, and chronic sepsis.

Diet is chosen to avoid excess of foods which may irritate metabolism and prepare the way for sensitization allergens. Rich creams and oils when combined with other factors in diet seem to do this, and to cause fatty acids to circulate in the tissue fluids. Milk, and especially creamy milk, eggs, cod-liver oil, milk chocolate, and rich proprietary tonics are examples. If vitamin medication is indicated the concentrated drop preparations may be the best. There is some chemical property in sour fruits, and especially in citrus fruits and bananas, which irritates the metabolism of allergically inclined individuals, especially when in combination with the rich fatty foods. The ripening of fruit is very important, and may be incomplete or only finished after the fruit has been gathered and packed. Proteins and carbohydrates, especially sugar, usually suit, and fresh salads should be eaten if liked. Sensitization is a more particular phenomenon than general irritation and overloading of metabolism. Numerous foods may contain irritant allergens, including whey, egg (white), fish, fowl, and some meats. Removal of the allergens by the elimination diet plan of Rowe[6] is possible.

Elimination from the skin is also important. Autophils tend to sweat, and a sweat is a wholesome relief to them. Controlled exercise is therefore good, but exercise taken immoderately or jarringly to the neuro-muscular co-ordination may produce waste products and overloading of metabolism, and irritate the autonomic nervous system. Autophils are very likely to be driven to excessive or jarring exercise by their keen mental activity. On the other hand, the relief of orderly activity to a sensitive autonomic nervous system is great. One can understand the value of massage and of rhythm and music in exercises, bringing as they do relief of tension and added interest.

Excitement and emotional stress may disturb the metabolism of autophils and upset an excitable autonomic nervous system. Disorders of blood pressure, pulse rate, and even acidosis may ensue. Erythema in conversation may indicate the strain that emotion puts on the autonomic nervous system of an autophil.

Toxins can interfere with metabolism or have adverse effects in nervous tissues. In autopaths there may be sensitization to bacterial allergens ; local irritation may determine the site of the allergic manifestation.

Sensitization is brought about by overdose, sudden and massive, or repeated and fractional, of an irritative allergen. It is difficult to avoid because it usually appears without warning, but when family histories indicate that a child may be an autophil, and perhaps also indicate a likely sensitization allergen, preventive measures can be taken.

### Treatment of Autopaths

An ordered control of metabolism and autonomic nervous system may prevent many autophils from becoming autopaths, but an overloaded metabolism or an irritated autonomic nervous system may result in some of the symptoms of allergy enumerated above. Sensitization may be very decided and the offending allergen obvious and localized. Desensitization may then be successful, and the removal of that one allergen may effect a cure. In most cases, however, the problem is not so simple. An autopath is probably liable to further sensitization to other allergens if the metabolic condition which produced the first persists. Again, sensitizing allergens may not be readily picked out, nor be limited in number. Specific desensitization is consequently not always possible or effective.

Treatment consists, therefore, not only in attempts at desensitization but also in breaking any vicious circle of infection and lowered general health, in raising the general health and well-being, in improving metabolism and elimination from the bowels, kidney, and skin, in avoidance of mental and physical stress, and in careful control of diet.

Medical remedies are divided into four classes: (1) those directed to the relief of allergic symptoms, such as adrenaline, ephedrine, and anaesthesin ; (2) those directed to improving metabolism and tone of nervous tissues by alteratives or tonics, change of air, or by removing chronic sepsis ; (3) those directed to aiding metabolism by supplying deficiencies in digestive juices or aiding elimination ; and (4) surgical measures for relief of spasm, including sympathectomy.

### Summary

Allergy is a state of sensitization in which the system shows habit reactions to certain foreign metabolic irritants, usually protein in nature. These reactions are dermal, vascular, haemic, respiratory, digestive, renal, arthritic, cerebral, or cardiac, according to the individual and to the local irritation, whether traumatic or infective or chemical, the last being usually the production of histamine-like bodies. Allergy tends to develop in autophils who have usually inherited an excitable autonomic nervous system and irritated an unstable metabolism. Autophils may remain unsensitized, unirritated, and in good health, or may become sensitized and irritated into being autopaths.

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J. C. Saunders (*Irish Journ. Med. Sci.*, September, 1934, p. 520) states that the average decennial mortality from diphtheria in the Irish Free State has increased from 4.7 per 100,000 in 1864–70 to 9.4 per 100,000 in 1921–30, whereas during the same period it has decreased from 78 to 3 per 100,000 in Denmark and from 11.4 to 2.9 per 10,000 at ages under 15 in England and Wales. A steady increase in mortality has taken place in the urban areas of Dublin, Cork, and Limerick, as compared with a corresponding decrease in the urban areas of Belfast, Birmingham, and Ipswich. The causes for the relatively high diphtheria mortality in the Irish Free State appear to be inadequate dosage of antitoxin, delay in its administration, and inadequate arrangements for its distribution to practitioners. It is probable that a vigorous scheme for diphtheria immunization would reduce the mortality as it has done in New York.

# DIVERTICULITIS WITH UNUSUAL COMPLICATIONS

## REPORT OF TWO CASES

BY

HUMPHREY FOXELL, M.B., B.S.Lond.

In most textbooks the subject of diverticulitis is dismissed in a few lines, but practitioners have had experience of difficult cases which have turned out to be diverticulitis, with some complication or another. These two cases illustrate such difficulties.

### Case Record No. 1

The first case was that of a man of 54 who gave the following history. His health usually was good, but some years ago he had a duodenal ulcer for which a short-circuit operation had been performed. This operation had been a complete success, and the only symptom which reminded him of his former trouble was occasional "acidity." When this condition arose he had been advised by a consulting physician to take at any such time 60 grains of sodium bicarbonate. He stated that this always gave him immediate relief. It had been his custom for some years to keep a supply of 5-grain tablets, and when he required a dose he would take twelve of these, as he found this the easiest way of measuring 60 grains. These tablets he purchased himself. Although he had a tendency to constipation he never allowed this to get the upper hand, as he was in the habit of taking purges; this point is rather important from the subsequent history.

On the morning of February 26th I was called in to see him owing to his being extremely sleepy, from which condition he could be roused with great difficulty for a few minutes only, during which time he remained drowsy and was never fully awake. The preceding day had been very cold, with a heavy fall of snow, and he had had a good deal of indigestion. He had noticed on former occasions that snow always made him "livery." As he was going out to dinner that evening he took his usual dose of sodium bicarbonate just before leaving home. He then drove himself and his wife about a mile to the dinner party. Before dinner he took a cocktail, but only drank half; normally he was an abstemious man. The house was very hot and the dinner started with some hot soup. After he finished it he pushed his plate away, folded his arms on the table, laid his head on them, and went fast asleep. He was roused with great difficulty, and he walked into another room, where he said he felt very funny. He then managed to make himself vomit, after which he felt better, but very sleepy. He was left in this room, where he slept soundly for about three hours. After having been woken up he was able to drive his car home without much difficulty, but could not drive into his garage. Before going to bed he took another twelve tablets of sodium bicarbonate.

Next morning when I saw him he was, as already stated, in an exceptionally sleepy condition. His pulse rate was 56 and of rather poor character. On the left side of the abdomen, about the middle of the descending colon, there was a lump as large as a big fist which gave the impression of being possibly a faecal mass. Rectal examination was negative; urine normal.

I gave him hypodermically 1 c.cm. of pituitrin and 0.5 c.cm. of 1 in 1,000 adrenaline, and after a short time he seemed to become a little less drowsy. The relatives expected, and demanded, a diagnosis. I therefore told them that I had found a condition of partial intestinal obstruction which must have been going on for a long time, and this allowed a slow absorption of waste products to take place, so producing a condition of poisoning by auto-intoxication. In other words he was suffering from sapraemia.

Later in the day a simple enema was given following an injection of 6 oz. of olive oil, with the result that an enormous stool was produced, in spite of the regularity of the taking of purges. During the rest of the day he gradually got better and by the evening was almost normal, except for a slightly drowsy state.

On February 27th—that is, two days after the onset of the sleepiness—he had a return of "acidity" and took another 60 grains of sodium bicarbonate about 6 p.m. At 7 p.m. he was extremely drowsy and had to be helped to bed. He slept soundly for about fourteen hours, when he was roused and was able to keep awake. He was given another enema, with a very large result, but still felt sleepy during the day.

On the fourth day he felt quite well again, and was so definite that he felt much better that on the sixth day he went back to his office and spent the usual day. An *x*-ray examination was carried out following the administration of a barium enema, and this revealed a condition of diverticulitis affecting mainly the descending colon, which also showed a very marked spasm. Thus the diagnosis of diverticulitis was confirmed. On the strength of this he was advised a daily bowel irrigation, and this was carried out.

We were now all congratulating ourselves on a satisfactory diagnosis and felt we were dealing with a more or less straightforward case, but on the same evening—that is, the sixth day—he came home from his office owing to a return of indigestion and took yet another 60 grains of sodium bicarbonate. The following day I was called in to see him and found him just as drowsy as he had been before, and I called in a consulting physician, who could throw very little light on the case. A lumbar puncture was performed. The intraspinal pressure was normal and the fluid itself was found to be normal to every test. We were then not very much further on, except that once again the patient recovered.

About midnight of the ninth day I received an urgent summons and I found the patient definitely cyanosed with Cheyne-Stokes breathing and a feeble pulse of only 48. An injection of pituitrin and adrenaline seemed to improve his condition somewhat. The following morning he was again seen by the consulting physician, who was still baffled by the condition. Ophthalmoscopic examination showed some anaemia of the retinal vessels suggesting cerebral anaemia.

Yet another attack occurred on the fourteenth day; and, talking over the case with his wife, who was naturally terribly anxious, it suddenly struck me that there was a definite connexion between the attacks of drowsiness and the taking of the sodium bicarbonate. I therefore asked her to let me have the bottle of tablets, and on tasting one, it was at once obvious that it was not sodium bicarbonate, but on throwing the remains of the tablet in the fire there was a yellow sodium-flame produced. I immediately took the tablets to be analysed, and the result was reported to me as medinal. This is also known as sodium bibarbiturate.

The remarkable part of this case is that in a space of a fortnight this man had taken six doses of 60 grains of medinal.

### Case Record No. 2

The second case was that of a man of 65 who was normally in robust health, a stocky type but inclined to be fat. He was a great worker, being the head of a very large concern in which he took a personal interest. He always suffered from a moderate degree of constipation, but kept his bowels working with a daily dose of salts first thing in the morning. It was also his habit to take Vichy water almost daily. He was inclined to be irregular with his meals, as he felt they were a waste of time and interfered with his work.

I was first called in to see him for this present illness on August 11th because he was not feeling well and had had "difficulty with his bowels and pain in his stomach." Examination of the abdomen revealed a large mass on the left side, reaching downwards for about 6 in. from the lower border of the ribs. The consistency of this mass suggested a collection of faeces. It was fairly tender on light pressure, but quite painful when pressed hard. A consulting physician saw him on this day.

The treatment employed was liquid paraffin by the mouth, non-residue diet, mainly fluid, and enemata. This latter produced soft and watery results, with several hard, stale, dark lumps, very few being any larger than walnuts. His progress appeared to be quite satisfactory, and although the lump was still palpable, it was considerably smaller.

As in the first case, everybody concerned was quite pleased with his condition, and we thought we were out of the wood. On the sixth day, however, I received an urgent call about 10 p.m. owing to a sudden attack of very severe pain, on the left side. He was then partially collapsed, cyanosed, and sweating; his pulse was poor. He stated that he had never endured such "terrible" pain before in his life. The tenderness over the lump was very marked, and he could hardly stand the lightest pressure.

A consulting surgeon was called in the same evening, and he considered that there was a possibility of a bowel perforation. He expressed a wish to have the opinion of another surgeon, and when the latter arrived later in the evening, they both considered that, at any rate, that evening the patient was in too bad a state to have his abdomen opened. Here it should be stated that he was a difficult subject to examine, owing to his build and to the extreme tenderness of the lump. Morphine was given hypodermically, and after a short time the condition became much better. Next morning—that is, the seventh day—he was fit enough to be removed to a nursing home, to be kept under observation.

Owing to the improved general condition it was considered possible to perform a laparotomy, should this be deemed necessary. One surgeon was inclined to take the risk, but the other thought the risk was too great, and, strange as it may seem, the consulting physician was rather in favour of the operation. A third surgeon was consulted, and it was decided to give the patient a barium enema and to take an *x*-ray by means of a portable apparatus. The *x*-ray revealed the presence, as in the former case, of several small diverticula, with a marked spasm of the descending colon.

A super-consultation was then held, at which were present three consulting surgeons, a consulting physician, the radiologist, and the G.P.! The result of this was that everybody agreed that if there was a real obstruction, then the only operation possible was one to relieve the obstruction by an opening into the bowel above this area. This would mean a colostomy of the transverse colon, and we came to the unanimous conclusion that this would be exposing the patient to too great a risk. Furthermore, the patient's condition was better, and there was now very little pain or tenderness, though the bowels were failing to function.

At this moment in the consultation a very dramatic interruption occurred. There was a tap at the door and the sister of the nursing home came in with a specimen glass full of a fluid that looked like blood. It actually was almost pure blood, and in fact was haematuria. The case was now more obscure, but one of the experts took a very serious view and expressed the opinion that the haematuria must be of toxic origin and that therefore the outlook was very grave; nevertheless, we still stood by our opinion that no operation was possible. The problem, however, was completely cleared up next day.

When I saw the patient next morning he seemed very much better. He had got rid of the barium and with it he had passed a good deal of faecal matter, but, more than this, he made a very important statement—namely, that when passing water that morning he had heard a little "tinkle." To cut a long story short, he had passed a small stone. Suddenly the case became clear. The severe attack of pain in the left side which occurred on the evening of the sixth day was actually an attack of renal colic due to the passing of a small stone down the ureter. The lifting about of the patient for the taking of the *x*-rays had been enough most probably to move the stone on over the brim of the pelvis into the bladder. This caused the haemorrhage which the patient got rid of a little later. The passing of the stone per urethram the following day completed the picture.

# AURAL VERTIGO*

BY

W. S. THACKER NEVILLE, M.D.DUB., F.R.C.S.ED.

HARROGATE

We recognize our position in space by means of the muscle senses in the soles of the feet, by our eyes, and by our semicircular canals. Labyrinthine vertigo consists in a false sense of movement of the patient or of his surroundings. The movement may be in a linear, rotary, or vertical direction, and is accompanied by nausea, vomiting, pallor, sweating, and sometimes diarrhoea. Sensations of forward and backward movements are not seen, but if present are in favour of a neurasthenic or cerebral vascular condition. Besides this false sense of movement the patient may really fall, or may be flung out of his chair, or have a sensation of being pushed, yet he never loses consciousness. The onset of these sensations is sudden; they last only a short time, and are followed by a feeling of unsteadiness on the legs.

The function of the labyrinth may be interfered with if there is a lesion in the vestibular tracts in the cerebellum or in the vestibular nerve, or if these nerve endings are affected by a toxin, or the blood supply of the semicircular canals is suddenly increased or decreased, or the fluid in those canals is exposed to pressure or toxins.

### Lesions in Vestibular Tracts and Vestibular Nerve

The commonest cause of a lesion which affects the vestibular nerve tracts in the cerebellum is thrombosis of the inferior cerebellar artery, in which there is a sudden onset of vertigo and nystagmus to the affected side associated with ocular sympathetic paralysis and paresis of the soft palate and vocal cord and disturbances of sensation. A vascular lesion in the lateral part of the pons may also, according to Brain, produce vertigo, deafness, and tinnitus associated with paralysis of the seventh and eighth nerves and disturbances of sensation.

The vestibular nerve tracts may also be affected in disseminated sclerosis, in which there is vertigo without loss of hearing. The vertigo is usually accompanied by an intention tremor, absence of abdominal reflexes, and extensor plantar responses with possibly optic atrophy. The nerve tracts may also be disorganized by a head injury. In such cases there is tinnitus and vertigo; the vertigo usually tends to become less, though in some cases it, like the tinnitus, persists for a very long time. Vertigo may be the aura of an onset of *petit mal*, but it can easily be differentiated from aural vertigo, since in the latter there is never loss of consciousness. Vertigo may also occur in neurotic individuals; it consists in a feeling of the legs giving way, and is accompanied by intense anxiety and palpitation which may, according to Russell Brain, be due to a fear of heart disease.

The commonest lesion of the vestibular nerve itself is a tumour of the eighth nerve. The patient complains of vertigo, tinnitus, and deafness, and the striking feature is that there is anaesthesia of the cheek and later fascial nerve paralysis. (Anaesthesia of the cheek may be preceded by anaesthesia of the cornea.) Examination of the labyrinth shows a complete loss of function with, according to Eagleton, a loss of function of the vertical canal on the opposite side.

### The Semicircular Canals in Causation of Vertigo

In an aurist's experience the semicircular canals themselves are the commonest cause of vertigo. These canals are surrounded by a network of blood vessels, and contain

* Read before the Yorkshire Branch of the British Medical Association, September, 1934.

fluid and nerve endings. On the peripheral aspect of the canals is the middle ear, which communicates with the canals via the oval and round windows.

Just as we can get changes in the walls of the blood vessels of the eyes, so we believe we can get similar arteriosclerotic changes with or without haemorrhages in the blood vessels of the labyrinth, which would account for the vertigo that occurs in elderly people on stooping or turning their heads. These blood vessels may undergo spasm with loss of hearing, then relaxation followed by tinnitus, giddiness, and return of hearing, and it is a question whether such cases could not be cured by stripping the sympathetic nerves of the internal carotid artery, or by removing the superior sympathetic ganglion. Russell Brain considers that spasm of these arteries also accounts for the vertigo that occurs in sufferers from migraine.

The fluid in the canal can produce vertigo when it is moved, as when one performs the rotation or caloric tests, or is on a ship. It is said that to avoid sea-sickness it is best to lie flat on the back. This fluid may also be affected by toxins ; thus in acute otitis media there may be vertigo and nystagmus to the affected ear due to absorption of toxin stimulating the nerve endings, or, if the infection is more severe, destruction of the nerve endings and consequently a nystagmus to the opposite side. In the case of the nystagmus to the same side, suction applied to the Eustachian tube or a paracentesis of the tympanic membrane will allow the toxic fluid to escape, or in severer cases a mastoid operation will be necessary. When there is nystagmus to the opposite side a serous or suppurative labyrinthitis must be diagnosed. As long as any hearing is present we diagnose serous labyrinthitis and do not operate, but when all hearing has gone and the hot caloric test is incapable of affecting the nystagmus we are forced to diagnose the suppurative condition. If the suppurative labyrinthitis is secondary to an otitis media I do not operate unless the signs of labyrinthitis increase instead of decrease, or unless meningitis appears, but if it follows an operation such as the removal of a polypus or a mastoid, I then perform a labyrinthectomy at once.

Besides reaching the semicircular canals directly from the middle ear as just described, toxins may reach the canals via the blood stream, as in the case of those from the intestine or from alcohol, tobacco, or a septic focus ; thus one patient drove his car from side to side of the street, but when his tonsils were removed his vertigo disappeared.

### Displacement of the Stapes

Another cause of vertigo is displacement of the stapes, which may be due to an oversecretion of fluid in the semicircular canals. This is considered by Mygind and Dederding to be the commonest cause of the kind of aural vertigo which is usually termed Ménière's disease. This water-logging of the labyrinth occurs in those who have faulty water metabolism ; such patients are usually easily recognized, as they show a loss of low notes and absence of or decreased bone conduction, deafness which varies from day to day, an increase in weight, and a thickening of the subcutaneous tissues. However, I would not diagnose a patient as water-logged without giving 1,000 c.cm. of fluid, and seeing how much fluid the patient had passed, and how much he or she had increased in weight after an interval of four hours. The increase in weight equals the weight of the retained fluid, and thus, by weighing the patient before the fluid is taken and at the end of four hours, the amount of fluid retained is estimated. Such patients are cured by dehydration with salyrgan, a no-salt diet, and extreme limitation of fluid.

An attack of aural vertigo in which the patient has nystagmus and vomiting may be arrested by an injection of bulbocapnine. This drug, orally administered, is also useful in some cases to ward off attacks.

Another cause of displacement of the stapes is blockage of the Eustachian tube, with consequent absorption of air in the middle ear. This occurs in inflammatory states of the Eustachian tube or in swelling of the mucous membrane due to water-logging. Such patients are cured by reducing the swelling in the Eustachian tube and by catheterization. To reduce the swelling in the Eustachian tube a nasal operation may be necessary.

At times no cause can be discovered to account for the presence of aural vertigo, and in those cases the best treatment is Mollison's—that is, destruction of the nerve endings by injecting alcohol into an opening made in one of the semicircular canals. This I have done on three occasions. Before adopting this treatment I used to destroy the cochlea and semicircular canals by a labyrinthectomy. The injection of alcohol, however, is easier, and exposes the patient to less trauma. Brain specialists such as Dandy, Cairns, and Dott cure this form of vertigo by dividing the seventh nerve, and lately Dandy has been successful in dividing the vestibular branch alone, and so retaining the remnant of hearing that is often present in these patients.

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## TONSILLECTOMY WITH LOCAL ANAESTHESIA

### A REVIEW BASED ON 500 CASES

BY

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For some reason unknown to me local tonsillectomy has never received very favourable consideration in England ; yet the mere fact that this is almost the only method employed in many of the large Continental clinics should be sufficient evidence that it is definitely worthy of greater consideration than it has hitherto received. Having just completed a series of five hundred cases in patients whose ages ranged from 16 to 74, I feel that a short description of the technique may not be out of place, since many advantages are claimed over the more universal dissection under general anaesthesia. The advantages of using a local anaesthetic are that the operation is considerably more speedy without there being any sacrifice of efficiency ; that there is a minimum amount of bleeding (often there is literally none at all) ; that there is no vomiting ; and that there is a cleaner dissection. The patient suffers no pain and extremely little discomfort.

### Technique

The nurse sprays the patient's throat several times with 10 per cent. cocaine and adrenaline, and then the injection, which is the most important part of the operation, is commenced. It should be stressed that the quantity of novocain solution injected is even more important than its strength. About 30 to 40 c.cm. of a 1/2 per cent. solution is recommended.

With a long needle, the point of which is curved almost to a right angle, the novocain is injected from a 20 c.cm. syringe. Five injections, each of approximately 3 c.cm., are made into each tonsil, the anterior portion of the capsule receiving three and the posterior portion two. The needle is inserted just under the mucous membrane, which is immediately thrown out into a bleb as soon as the novocain reaches the tissues. It should be inserted first near the uvula, with the point turned outwards and downwards, a few millimetres from the free border of the pillar; then midway between the upper and lower pole, with the point directly downwards; and finally into the lower pole near the base of the tongue, with the point directly downwards. The remaining two injections are made behind the posterior pillar in the upper and lower poles respectively. Here, however, the needle point should enter the tissues horizontally, and the shaft of the needle be drawn well over into the opposite angle of the mouth. After the injection the pillars are, of course, very swollen and oedematous, and the patient should be left for ten minutes for absorption to take place. This wait is important, for during this time the capsule becomes so well infiltrated that the actual dissection of both tonsils may be completed with ease in less than three minutes.

The patient is now led into the theatre and placed in an ordinary chair. The surgeon sits facing him, and for convenience the patient is made to place a hand on each of his (the surgeon's) knees. A nurse standing behind the patient's chair holds the head in the required position and wipes away from the mouth any blood-stained saliva, after occasional spitting. No gag is necessary; nor, after the vulsellum has first gripped the tonsil, is a tongue depressor required. Beyond a sharp dissector, to incise the pillars, and a blunt dissector with a serrated edge, to free the tonsil from its now plainly marked capsule, no other instrument is required, except possibly a snare for the lingual prolongation. After the first tonsil has been removed it is a good plan to pack a small, loose piece of gauze into the fossa before proceeding.

If there are two or more patients for tonsillectomy it is a great saving of time to complete all the injections first, since the best effect from the novocain may be obtained if left for a minimum of ten minutes and a maximum of forty minutes. In this way two or three cases may be completed in considerably less than half the time taken by general anaesthesia. As there is little or no bleeding, an assistant is quite unnecessary. A powerful headlight is, of course, an essential.

### Conclusion

Invariably the patient volunteers the statement that the operation has not been as painful as a tooth extraction, while all will admit, on being questioned, that "it didn't hurt a bit." It would seem from the patient's point of view that the apprehension is the worst part of the whole operation. This may be considerably allayed by a preliminary injection of morphine, and also during the operation itself by what the Viennese call "vocal anaesthesia." There is no doubt that a patter of conversation, however irrelevant, helps to quiet the patient. After the operation has been completed the patient walks back to his bed, and is able to return home within three or four days.

In this series of cases, which comprises every tonsillectomy that has recently come under my care—that is, unselected—I have had only one case where I was embarrassed by bleeding, and that finally required a general anaesthetic. There were three cases in the series that bled after getting back to bed, requiring the use of the clamp, but these were due to an incomplete dissection. No vessel has had to be tied. From the injection of novocain I have seen no harmful effects.

# Clinical Memoranda

## NON-TROPICAL SOLITARY ABSCESS OF LIVER

The subject of solitary abscess in the liver is usually associated in the mind with a tropical disease. It is of interest, therefore, to review a case where no possibility of a tropical origin could be admitted. Cabot,[1] discussing liver abscess, states that as a rule the diagnosis is made on the aetiology rather than on physical signs. Where there is no obvious cause such as amoebic dysentery or appendicitis the diagnosis becomes increasingly difficult. However, as Horder[2] has pointed out, such cases are often due to *Staphylococcus aureus* and are characterized by a latent interval between the original staphylococcal infection and the development of a liver abscess.

### CASE RECORD

A. L., 20 years of age and single, had been in good health and following her occupation as a weaver until July, 1933. She then began to complain of slight intermittent pain in the right side of her chest which was at first regarded as pleurodynia. However, the pain became constant, more severe, and localized to the region of the eighth rib interspace in the right mid-axillary line. To digress for a moment, it is to be noted that later the liver was found adhering to the parietes at the place where she located the pain. Slowly her health deteriorated, anorexia, loss of weight, and night sweats being added to her original symptoms. After five weeks she took to bed, and one week later (September 7th) she was admitted to the Blackburn Royal Infirmary.

On admission, she appeared thin and anaemic. Her temperature was raised and there was obvious toxaemia. Her heart and lungs were healthy, and the chest moved normally on respiration. There was, however, a suggestion of bulging of the lower part of the right side of the chest, which must have been due to enlargement of the liver. The lower margin of the liver could not be palpated as there was considerable muscular rigidity in the right hypochondrium. The abdomen was thin and the spleen was not palpable. A search for tenderness was not very satisfactory as the patient could not distinguish between pain and tenderness. The kidneys were not palpably enlarged nor was tenderness elicited during palpation. A provisional diagnosis of perinephritic abscess was made, leading to a thorough investigation of her kidneys. An *x*-ray photograph of the urinary tract was negative. Her urine on examination revealed no abnormalities. Normal pyelograms were obtained from both sides, so it was decided to look to the liver as the probable cause of her illness. The chest was examined with the *x*-ray screen but the diaphragm was seen to move normally with respiration and did not present any abnormal bulging or fixation.

On September 8th her blood was examined. The red blood cells were estimated at 4,400,000 per c.mm., haemoglobin 65 per cent. The white blood cells showed a leucocytosis of 20,000 per c.mm. with 80 per cent. of neutrophils in the differential count.

Whilst these investigations were in progress her temperature rose every evening to 102° F. and fell in the morning to 99°, and she was obviously losing ground every day. Liver abscess was suspected, and on September 10th the liver was explored with a Barker's lumbar puncture needle under a general anaesthetic. Introduced in the mid-axillary line and passed upwards and backwards, as is usually recommended, no pus was found, but, on directing the needle downwards and inwards towards the abdomen, thick pus was easily obtained. The abdomen was then opened by an incision just below the right costal margin. The liver was not enlarged downwards, but omentum and bowel were firmly adherent along its lower margin. Working up on the right side between the diaphragm and the lateral surface of the liver, an area of adhesions was encountered about three inches from the lower margin of the liver. On breaking this down the finger slipped easily into a large unilocular abscess cavity in the right lobe of the liver.

[1] Cabot: *Physical Diagnosis*, eighth edition, p. 380.
[2] Horder: *Medical Notes*, p. 73.

The pus was evacuated and a tube passed into the abscess cavity through the abdominal incision. From that time she progressed in uneventful fashion.

At the time of writing (July 6th, 1934) she is in good health and married. The pus was examined and a pure culture of *Staphylococcus aureus* grown from it. Her history was gone into again and apparently she had had a carbuncle on her right forearm some months prior to the present illness. If this was the portal of infection a well-marked latent period occurred in this case prior to the onset of symptoms of liver abscess.

I am indebted to Dr. J. J. O'Connor of Oswaldtwistle for so kindly supplying me with details of the after-progress of this case.

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## RECOVERY OF SIGHT FOLLOWING SEVERE CORROSIVE BURN OF CORNEA

The case recorded below illustrates the value of early and intensive treatment in securing recovery from what may at the first instance appear to be beyond hope.

On January 28th, 1934, a workman had to remove a large cock from a chemical plant because of the tap having seized. He had this object fixed in a vice, and tried to loosen the part by the flame of a blow-lamp. He did this on his own part, and contrary to regulations, and, further, he was not wearing protective goggles.

During operations an explosion occurred, and hot fluid contents splashed all over his face and into both eyes. He at once applied water to his eyes, and was rushed to the adjacent first-aid station. The fluid on the cheeks and in the eyelids was found to be strongly acid. The conjunctivae were intensely swollen, and the cornea completely opaque and white. Immediate treatment to the eyes consisted of inducing a gentle, continuous flow of a 1 per cent. alkaline solution of sodium carbonate at 98° F. for about ninety minutes. As a relief from pain morphine 1/4 grain was given hypodermically. The facial burns were treated by alkali and then covered with a tannic acid jelly, lint, etc., to maintain asepsis and protect from air changes.

The man was fairly free from shock, and was sent by ambulance to Manchester Royal Eye Hospital, where he was at once placed under treatment. The eyes were washed out every half-hour for over twelve hours with a weak alkaline fluid, atropine was instilled, and after this time washing was reduced to once per hour for a further day—after that at longer intervals. For about two weeks no hope was given for even partial recovery of sight, but soon after the corneae began to clear up, and then favourable progress was rapid, the prevention of conjunctival adhesions having been achieved. In about four weeks' time the corneae were almost normal, the man's vision being, of course, unaided by accommodation owing to the daily instillation of atropine. The scars on the face were not very important, but cicatricial contractions formed on and above one upper eyelid. These luckily did not interfere with the action of the eyelid.

The man was discharged from hospital roughly six weeks from the date of the accident, and attended three times a week for another fortnight. Atropine was then discontinued, and some sixteen days later he resumed work, with practically normal vision and no corneal opacities.

It is quite evident from this gratifying result that very persistent washing with suitable fluids is called for in these cases, and, for the man's part, he should be glad the corrosive was not of alkaline type.

I am writing this to mark my appreciation of the very strenuous and successful methods used by our Royal Eye Hospital.

THOMAS H. WIGNALL, M.B.,
Medical Officer, British Dyestuffs Corporation, Blackley, Manchester.

# Reviews

## REGIONAL ANATOMY

The *Synopsis of Regional Anatomy*,[1] by Professor T. B. JOHNSTON, is a book which has been written with the object of providing the student with a short summary of the main facts, and is intended to be used by the reader with the bones and dissected preparations before him. It is assumed that the student has already acquired a working knowledge of anatomy, and merely needs a guide for the revision of his previous knowledge, as, for instance, when preparing for the final examinations of the medical curriculum. The author does not attempt to include the finer details of anatomy required for the award of honours or examinations for the higher diplomas, nor does he allude to recently published work on special subjects. The book is a plain, straightforward statement of the essential facts of anatomy written for the benefit of the average student, who has insufficient time to read through larger volumes, which often comprise about 1,500 closely printed pages. The value and interest of the book is very considerably enhanced by short references to the practical application of the facts recorded, and also the employment of italic type to emphasize the more important points.

A special feature of this third edition of the *Synopsis* is the use of the revised terminology which has recently been approved and adopted by the Anatomical Society of Great Britain and Ireland. The reader will readily appreciate the value of this alteration, as he will at once realize that the change is in the direction of simplification. A great deal of time and thought has been expended on this task of revision, which has provided an eminently satisfactory solution of the vexed question of old *versus* new terminology ; and Professor Johnston, who has been one of the chief workers appointed to serve on the Revision Committee, is to be congratulated on the well-merited success which has crowned this advance in descriptive nomenclature.

Within the limits of the author's intention the book is admirably suited for the student's requirements, and is remarkably free from errors, any defects being rather those of omission than commission, and we can confidently recommend it as a reliable epitome of an extensive and detailed subject.

## QUINSY

A further volume of the Collection of "Médecine et Chirurgie Pratiques," published by the firm of Masson, is *Les Phlegmons de la Loge Amygdalienne*,[2] by G. CANUYT and P. PAULL. It might be supposed that little fresh could be produced by the study of such a hackneyed subject as quinsy, but Professor Canuyt has raised several points which deserve notice. His anatomical notions on the relation of the tonsil to the muscular wall of the pharynx will not receive general support and are not in accord with recent anatomical observations, but he has gone to much trouble to prove by experiment and by clinical and post-mortem observations that the pus in a quinsy collects between the tonsil and the lateral wall of the pharynx. It has been suggested that the pus may occupy a deeper plane, but it would not have occurred to many that such elaborate proof of a self-evident proposition in pathological anatomy was necessary.

[1] *A Synopsis of Regional Anatomy*. By T. B. Johnston, M.B., Ch.B. Third edition. London: J. and A. Churchill, Ltd. 1934. (Pp. 460 ; 11 figures. 12s. 6d.)

[2] *Les Phlegmons de la Loge Amygdalienne*. By Professor G. Canuyt and Dr. P. Paull. Paris: Masson et Cie. 1934. (Pp. 138 ; 35 figures. 16 fr.)

Professor Canuyt is a strong advocate of the use of the exploring needle and syringe to prove the presence of pus here, just as it is used in other regions, a suggestion which may certainly be often of value. In the treatment of quinsy the classical method described by Chiari of opening it by an incision in the middle of a line uniting the last molar with the base of the uvula is considered inadequate. Of the more radical methods the authors prefer to open the tonsillar fossa behind the anterior pillar and evacuate the pus without removing the tonsil. The cavity between the tonsil and the lateral pharyngeal wall is packed and the removal of the tonsil completed a few days later, but no special reason is given for not completing the operation of tonsillectomy in one stage, as recommended now by many laryngologists. Thus a rather unsatisfying compromise is reached between a primary tonsillectomy giving very free drainage, and the more conventional method of simple incision or drainage through the supratonsillar fossa followed after an interval for healing by tonsillectomy, if the patient is willing to undergo further treatment. Furthermore, the damage inflicted on the anterior faucial pillar by the technique advocated will not receive general approval.

The authors are certainly able to show that the classical method has unsatisfactory features, and the increasing adoption of the method of primary tonsillectomy supports their contentions. They have done service by calling attention to the pathology and treatment of a condition which is frequently and wrongly dismissed as trivial, but unfortunately have spoiled a book well worth reading by an astonishing amount of most tedious repetition.

## ESSAYS ON PULMONARY TUBERCULOSIS

Dr. F. M. POTTENGER'S *Tuberculosis in the Child and the Adult*[3] is rather a difficult book to label. Although it covers nearly the whole range of pulmonary tuberculosis it is not a textbook on the subject, nor is it a book of reference. It is perhaps best described as a coherent sequence of essays on almost every aspect of the problem, some contemplative and suggestive, others didactic and severely technical. This method of compilation gives the work quite a different balance from that of most books on the disease. Dr. Pottenger has been a well-known publicist for several years on certain phases of pulmonary tuberculosis; he is also the sponsor of some quite original views, and it would seem that he has used this book to collect the essence of his original work and to correlate it with the general principles of the diagnosis and treatment of pulmonary tuberculosis. Those who are familiar with his writings will find, as they expect, that the subject of the visceral neurology of pulmonary tuberculosis and its bearing on symptoms, physical signs, and diagnosis is treated very fully.

It is arresting to find, in these days of the ascendancy of the *x* ray, such strong advocacy of the value and practice of percussion and palpation. The reader may well quail at the task of acquiring such a delicate tactile sense as the author suggests he should; but since, if he hopes to be a good physician, he can never be too skilful in his methods of examination, he will find in this book fresh instructions on what is rapidly becoming a forgotten art. It must be borne in mind, too, that Dr. Pottenger does not ignore or undervalue the *x* ray, but his experience teaches him that, even with the help of the film, painstaking attention to minute physical examination is still well worth while. Elsewhere the book expresses broad views, the results of the author's very wide experience, with an occasional rapid descent to the details of everyday practicalities, and finishes with some interesting specimen case histories illustrated with the usual unconvincing *x*-ray reproductions. (This unconvincingness is not the fault of author or publisher, but seems to be a vice inherent in all reduced *x*-ray reproductions.)

In such a work the carping reviewer could find many statements to criticize and opinions with which he strongly disagreed. But the opinions of an experienced man, whether agreeable or not, are always worth attention, and these this book provides, so the reviewer can safely leave the reader to agree or disagree with them for himself, knowing that in either event the reading of them will stimulate thought and be found worth while.

[3] *Tuberculosis in the Child and the Adult.* By Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P. London: Henry Kimpton. 1934. (Pp. 611; 85 figures. 36s. net.)

## A CYCLOPAEDIA OF MEDICINE

With the eighth, ninth, tenth, and eleventh volumes of the giant undertaking known as *The Cyclopedia of Medicine*,[4] and edited by Dr. G. M. PIERSOL, the subject-matter is carried a big step further, ranging from "Larynx, disorders of," to "Tartar and Tartrates" (omitting cross references not dealt with in the pages here reviewed). Random sampling of the four latest members of this series has revealed an excellent article on basal metabolism, by Dr. W. M. Boothby of the Mayo Clinic; a very practical account of ophthalmology as an aid to neurological diagnosis, by Edward Hartmann of Paris; and several well-illustrated sections on different aspects of radiology in vol. x. Similar experimentation with the index of vol. ix brought to light a section on acute lobar pneumonia of over seventy pages (double columns), based apparently upon 255 references, and the result is a bewildering collection of facts and observations which seems out of place in a work of this kind. This remark assumes that the whole production is mainly intended for the general practitioner out of touch with a good library, for the specialist is unlikely to require multiple monographs whose contents are often out of date as soon as publication has taken place. There is one more volume to come and an elaborate desk index. The British contributors to vol. xi include Professor John Fraser of Edinburgh, Professor L. S. P. Davidson of Aberdeen, and Dr. Alfred Piney.

## APPLIED CHEMISTRY

The current edition of *Thorpe's Dictionary of Applied Chemistry*, which began thirteen years ago and was completed seven years ago, is now being brought up to date by the publication of a two-volume supplement, of which the first volume is under review.[5] The editors, Professors J. F. THORPE and M. A. WHITELEY, point out that probably greater progress in chemistry has been made during the last decade than during any corresponding period in the past, and hence an urgent need has arisen for including an account of these important advances in their dictionary. Instead of producing a new edition, it was decided to prepare a supplement dealing with selected subjects in which the greatest and most striking advances had been made. The subjects chosen are dealt with in short monographs by workers who are eminent in the field with which they deal. More than one hundred persons have contributed to this volume, and the list of

[4] *The Cyclopedia of Medicine.* Vols. viii, ix, x, and xi. Editor-in-Chief: G. M. Piersol, B.S., M.D. Amply illustrated with cuts and full-page black-and-white and colour plates. Philadelphia: F. A. Davis Co. 1934. (120 dollars.)

[5] *Thorpe's Dictionary of Applied Chemistry.* Supplement, vol. i, A to M. By Jocelyn Field Thorpe, C.B.E., D.Sc., F.R.S., F.I.C., and M. A. Whiteley, O.B.E., D.Sc., F.I.C. London: Longmans, Green and Co., Ltd. 1934. (Pp. 680; illustrated. 60s. net.)

contributors includes most of the names best known in British chemistry. Each monograph gives a short review of important recent work in its subject, and also a few selected references.

The articles are arranged in alphabetical order, and the first volume covers the first half of the alphabet. The dictionary embraces the whole of chemistry, but it is interesting to note that a large proportion of this volume is devoted to subjects of biochemical or pharmacological interest. For example, there are relatively long articles on carbohydrates, enzymes, fermentation, and feeding materials, and on organic arsenicals, cinchona alkaloids, and digitalis. The prominence of such subjects is interesting evidence of the remarkable advances that have been made in organic chemistry and biochemistry during the last decade. This supplement will be found of great value by all who want a means of quick reference to new work in chemistry, and the liberal treatment of biochemical subjects makes it of special interest to those concerned with chemical aspects of medicine and biology.

## THE DEVELOPMENT OF MANUAL SKILL

The volume on *Manual Skill, its Organization and Development*,[6] by Dr. J. W. Cox, is concerned with problems relating to manual operations which involve the manipulation and adjustments of objects to one another. Such operations are performed for many hours every day by hundreds of thousands of our industrial workers, and it is therefore of great practical importance for us to ascertain how skill in these operations is best acquired, and whether skill acquired in respect of one operation is transferable to other manual operations which may be substituted. The investigations described by Dr. Cox are practically confined to the operations involved in the assembly of the eighteen component parts (rings, screws, porcelain base, etc.) of electric-lamp holders. They were tested very thoroughly on a group of seventy adults, and in less detail on about 200 boys and girls. A number of conclusions were arrived at which should, if confirmed, be of very great advantage to industry.

The main conclusion related to the differences induced by practice and by training. It appeared that skill developed by the repetition of one manual operation a large number of times conferred but little advantage in the performance of other operations undertaken subsequently. When, on the other hand, repetition is replaced by instruction consisting of talks, exercises based on the operation in question, and a limited number of repetitions of it, the skill thereby developed at no additional cost in time is transferable to other operations over a fairly wide range of manual activity. Moreover, the limits of proficiency attainable by training may far exceed those attainable by uninstructed repetition. These results indicate the wastage of effort produced by the customary practice of allowing beginners in assembly rooms to pick up their work as best they can, and suggest the advantages of substituting a short course of systematic training.

In other chapters of the book Dr. Cox shows that manual ability is to a small extent dependent on general intelligence, but chiefly upon the factors of mechanical aptitude and manipulative skill, and upon factors specific to the particular operation involved. Finally, he discusses in detail the subjective experiences involved in carrying out the operations of assembling, but he is too analytical in his treatment, and a more synthetic attitude might help in elucidating the theoretical basis of these valuable experimental results.

[6] *Manual Skill. Its Organization and Development.* By J. W. Cox, D.Sc. London: Cambridge University Press. 1934. (Pp. 247; 53 figures. 16s. net.)

## Notes on Books

Dr. ROY M. DORCUS and G. WILSON SHAFFER have written a book entitled *Textbook of Abnormal Psychology*,[7] the purpose of which is to fill the needs of advanced students of psychology, pre-medical students, and medical students who desire more psychological information. Throughout the authors have attempted to approach the discussion of abnormal phenomena by means of consideration of the normal; for, as they point out, the symptoms and behaviour of abnormal individuals are not seen as new or mysterious ways of reacting, but are recognized as exaggerated manifestations of normal functioning. A vast amount of matter has been collected in this book, and some problems are discussed which have been somewhat neglected by psychopathologists. It is interesting, for example, to find an admirable discussion by the writers of this volume of the psychopathology of handedness in relation to stammering and stuttering. This voluminous work would seem to be rather a heavy meal for pre-medical students to digest.

The little work entitled "Healthier and Longer Life,"[8] by EMILIO J. PAMPANA, contains excellent advice for the lay public concerning cleanliness, exercise, diet, ventilation, sleep, periodical visits to the doctor and dentist, the most important social diseases, prevention of acute infections, hypertension, rheumatic fever and heart disease, latent infections, especially of dental origin, and accidents.

In his short monograph on *The Atom*[9] Dr. TUTIN propounds yet another view of atomic structure. However much physicists may differ about precise details, it is generally held that the atom consists of a massive nucleus surrounded by electrons. Dr. Tutin's alternative view reverses this: he regards the main mass as being arranged peripherally and the nucleus as being relatively light. The book is fairly entitled to the praise of being concise and short, but we think it need not seriously disturb those who hold—as most chemists and physicists do—that the main mass of the atom is in the nucleus.

Mr. ARTHUR BRYANT is well known for his researches into the history of the Restoration period in England. He has written *King Charles II*, and is producing an admirable Life of Mr. Samuel Pepys, the diarist. The volume on *The England of Charles II*[10] is clearly a parergon or by-product of these studies, for they contain in narrative form the information which he has gathered in his reading. He tells of the sights and sounds which would have struck a foreigner on his arrival in England when the Commonwealth was giving place to Royalty; of the appearance of London and the country and of the habits and pastimes of the people. It is a book easy and pleasant to read, but as one reads it is remarkable to note how little the country life of England has changed in two hundred and fifty years, and how the English character and habits remain as they have always been. Love of travel is predominant in the English. The pilgrimages gave place to visits to Bath, Epsom, Harrogate, and countless smaller spas; these in turn have been displaced by hiking, aimless motor trips, and, more recently, by pleasure cruises. Vestiges of the old village life still remain in many parts of the country. The women work in the fields as they used to do; the saddler mends the harness with his own hands, the wheelwright and the smith work in the open, churchyards are overfull, sanitation is still rudimentary, and the water supply is scanty and bad. All this Mr. Arthur Bryant tells about, and his book gives much room for thought. The more things change in rural England the more they remain the same.

[7] *Textbook of Abnormal Psychology.* By Roy M. Dorcus and G. Wilson Shaffer. London: G. Allen and Unwin, Ltd. 1934. (Pp. 389. 16s. net.)

[8] *Vita più sana e più lunga.* Libro d'igiene dedicato alle persone culte. By Emilio J. Pampana. Rome: Edizioni "Annali d'Igiene." 1934. (Pp. 114. 12 lire.)

[9] *The Atom.* By John Tutin, D.Sc. With an introduction by Professor F. Soddy, F.R.S. London: Longmans, Green and Co. 1924. (Pp. 103. 6s. net.; postage 3½d.)

[10] *The England of Charles II.* By Arthur Bryant. London: Longmans, Green and Co. 1934. (Pp. 199. 6s. net.)

# PUBLIC HEALTH CONGRESS IN LONDON

The fourth biennial Public Health Congress and Exhibition at the Royal Agricultural Hall, Islington, arranged by a council representing the Ministry of Health, the Board of Control, and municipal and county council organizations, was held last week. A very large number of discussions took place, sometimes proceeding simultaneously in three sections, and were attended by public health and sanitary officers and workers in connexion with voluntary associations from all parts of the country. The congress was opened on November 19th with a short address by Sir HILTON YOUNG, Minister of Health, who spoke again of the "drive" against the maternity death rate, and the decision to hold special inquiries in areas where the rate was abnormally high. In a reference to voluntary sterilization on the lines of the Departmental Committee's report, he called for an expression of the national mind and conscience on the subject.

The first session of the congress was occupied with an address by Sir George Buchanan, who described the international arrangements for preventing the spread of epidemic diseases. This is printed in the opening pages of our present issue.

## VOLUNTARY STERILIZATION

The largest attendance at any discussion was at one arranged by the Joint Committee on Voluntary Sterilization, to consider the report of the Departmental Committee (the Brock Committee).

Professor JULIAN HUXLEY remarked that this subject was less controversial than formerly. The unanimity of the Brock Committee itself was a testimony to the overwhelming weight of factual evidence presented by sixty witnesses. Many individuals and organizations previously hesitant had been persuaded by the report to come down on the side of action, notably the Central Association of Mental Welfare. The discussion was generally confined to the case of mental defectives, but the Brock report also covered those who suffered from mental disorder and grave hereditary physical defects and probable carriers. Sterilization had nothing to do with castration, and left the sexual impulse untouched, so that it was possible and reasonable for sterilized individuals to marry. Prohibition of marriage as a means of preventing perpetuation of hereditary defect had been strongly advocated by certain people, but the great trouble was illegitimacy. The sterilizing operation was not dangerous, and over 16,000 people had already been sterilized in the United States. No responsible person in this country proposed compulsory sterilization. Voluntary sterilization was not an alternative to institutional treatment, but the complement of it. Institutions had a twofold function: to look after people not completely capable of looking after themselves, and to educate and stabilize the mental life of higher-grade defectives. When this process of stabilization had been brought to a certain point at which the people were able to live in the general community, it was then that they should be sterilized. It was true that mental defect might be due to non-hereditary causes, but half of it was distinctly hereditary, and in a great many other cases bad heredity reacted with bad environment to produce the defect. Prevention of parenthood either by segregation or sterilization was the only method whereby the burden of defect could be reduced. A further point was that mentally defective people made bad parents, and it was in the interests of the children themselves and of social justice that, wherever possible, mental defectives should not be allowed to have children. It seemed to him, as a biologist and as a citizen, that there was an overwhelming case for action. He denied that eugenics had a class bias; in fact, the legalization of voluntary sterilization would give to the poor facilities available at present only to the well-to-do. The mentality of this country would prevent a reproduction here of the developments in connexion with this subject which had taken place in Germany.

Dr. C. P. BLACKER described certain disadvantages of the Nazi method as opposed to the voluntary principle which "saturated" the Brock report. In Germany nine conditions were specified as justifying voluntary or compulsory sterilization. These included schizophrenia and manic-depressive insanity, with the result that German doctors, fearing to subject their patients to the compulsory stigma, had refrained from definite diagnosis and taken refuge in vague terms such as psychasthenia and neurasthenia. People in Germany also hesitated to go into institutions for treatment lest one such diagnosis be made and they be sterilized compulsorily. In America twenty-seven States had sterilization laws, all, except in Vermont, with compulsory clauses, but from 80 to 90 per cent. of the sterilizations in the United States were voluntary. Surgeon Commander JAMES, M.P., discussed the prospects of legislation, which, he said, depended entirely upon the state of public opinion, not upon the initiative of the Ministry of Health. A great change had taken place in public opinion, and now the only organized body in this country opposed to voluntary sterilization was the Roman Catholic Church.

Mr. GEORGE GIBSON, a member of the Trade Union Congress Council, moderately stated the case against sterilization. He urged that a Royal Commission on the subject should be set up with its proper element of lay opinion. Biologists and medical men as eminent as any who had spoken that day had reached different conclusions. The social aspects of this problem had not received adequate consideration, though they were as important as the medical and eugenic with which the Departmental Committee was exclusively concerned. He feared legislation which meant one law for the rich and another for the poor, especially when the law might entail the deprivation of elementary human rights. Public opinion—not expert opinion merely—must be persuaded and convinced that existing methods were ineffective or could not be made effective without resort to these drastic measures; also that this procedure, if sanctioned, would achieve its purpose. It was well known that from the union of normal persons mental defectives sometimes appeared, and that from the union of mental defectives (even both parents) came children sometimes remarkably endowed with intellect or character. The genetic result could not be predicted. The Brock Committee had shrunk from the responsibility of advocating compulsory sterilization because it shrunk from the necessary corollary, the setting up of a body of experts entrusted with the necessary determination. It was said that in voluntary sterilization the consent of the defective himself or of his parents or guardians must be secured. This might technically be so, but the speaker could not believe that this would in practice in a given case outweigh the opinion of the experts. The distinction between compulsory and voluntary sterilization was largely unreal; there would be no real choice. He believed that a much more searching investigation into social problems and ante-natal and post-natal environment was necessary. The environmental factors which were the cause of mental unfitness should be better ascertained before legislation was proposed. He asked whether there was any evidence that the problem was insoluble from the point of view of institutional treatment. Ought not research to be intensified into the transmission of taint? Sterilization in the final analysis was a confession of defeat.

Mr. E. W. CEMLYN JONES, of the County Councils Association, and Councillor LOXLEY, of the Association of Municipal Corporations, spoke in general support of the voluntary policy. Sir FRANCIS FREMANTLE, M.P., said there was a considerable body in Parliament not committed to the proposals of the Departmental Committee. One proposal to which Parliament would certainly not assent was that in the case of the feeble-minded their future should be decided for them by their parents or guardians. That would amount to compulsion. But if that proposal were cut out the most serious cases would go by the board, and voluntary sterilization would mean that only the more enlightened and conscientious among the mental defectives submitted themselves to the pro-

cedure. This being so, it might even prove to be a dysgenic measure.

Professor HUXLEY said in reply to this last point that already the parents or guardians of these people decided their future for them when they were segregated in institutions. The worst cases—imbeciles and so on—were dealt with by segregation now. The trouble was with the high-grade defectives, and they were the people capable of consent. He went on to urge that the process of evolution, which has led up from the lowest forms of life to the human being, could only be continued by man deliberately and consciously taking control of his own destiny. It was only during the last twenty years that control of the size of the family had taken place, and now it was proposed that man should improve the quality of his own stock. Far from being a confession of defeat, as Mr. Gibson had called it, it seemed to him the beginning of control of destiny by man in furtherance of the great stream of evolutionary progress.

### BOARDING-OUT OF MENTAL PATIENTS

A less animated but useful session was devoted to the question of the boarding-out of patients from mental hospitals. Dr. W. BROOKS KEITH, medical superintendent, St. Audry's Hospital for Mental Diseases, Suffolk, said that a scheme of boarding out had been in operation there for over a year, during which time twenty-six patients had been placed in the care of suitable guardians. No difficulty had been experienced in finding guardians for women patients, but it was difficult to persuade prospective guardians to accept men. Neither the age of the patient nor the form or duration of the mental disorder was of much help as a guide in selecting cases ; the point of importance for consideration was the patient's behaviour, and one had to be prepared for surprising disappointments in patients whose behaviour worsened when they got outside the institution. The ideal type for boarding-out was a case of simple dementia or the medium-grade defective without vicious propensities. This work had been done not under Section 57 of the Lunacy Act, which was the usual section for boarding out, but under Section 55, whereby power was given to visiting committees to grant to patients leave of absence on trial. Under this section the scheme had worked without the slightest hitch or difficulty, and one of the main reasons for this was the ease with which the patient might be removed from, or returned to, the hospital or transferred from one guardian to another. From the point of view of the patients he had nothing but good to say of the scheme, and whether they had been right or wrong in the way they had started it in Suffolk, he was satisfied that they had brought a little happiness into the lives of a few poor souls who were in much need of it.

Dr. A. A. W. PETRIE, medical superintendent, L.C.C. Mental Hospital, Banstead, described an attempt made there to board out a number of quiescent chronic patients either with their relatives or in foster homes. Of eighty-two patients so treated some twenty-two had returned to hospital for various causes. Mental relapse accounted for only 25 per cent. of the latter. In at least another 25 per cent. the patients definitely preferred to be in the mental hospital, having missed the entertainment and general sociability of the institution. Partial relapses were associated with inability to adjust to external conditions, but during a little over a year fifty-six patients from Banstead had been boarded out or placed on prolonged trial.

Dr. KATE FRASER, Deputy Commissioner, General Board of Control, Scotland, said that in Scotland this procedure was long past the experimental stage. There was no part of Scotland where boarded-out patients were not to be found. Indeed, in many parts there was a kind of hereditary guardianship, patients being handed down from generation to generation. One man had been fifty-four years in the guardianship of successive members of the same family. She gave unstinted praise to the guardians ; the success of the scheme lay almost entirely in their hands. One great advantage of the scheme was that people in general were coming to regard patients suffering from mental illness as persons not to be shunned or feared.

At the same session Dr. REGINALD WORTH described the work of the Mental After-Care Association, of which he is chairman, and the assistance it gave to local authorities, both in after-care and in fore-care. Mr. L. G. BROCK, Chairman of the Board of Control, who presided, referred to the experience of Holland in this respect. There was an elaborate system of after-care in Rotterdam, and the Dutch superintendent had told him that it was a good investment, because it enabled the institution to discharge patients at a much earlier stage than would otherwise be possible. If the Dutch, who were a practical people, not sentimental, discovered its advantages there must be a great deal in it.

### TEAM WORK IN ANTE-NATAL AND POST-NATAL CARE

A discussion on this subject took place under the auspices of the Association of Maternity and Child Welfare Centres. The principal speaker, Professor F. J. BROWNE, of University College Hospital, repeated in substance his remarks in a discussion at the Royal Society of Medicine, more fully reported elsewhere in this issue. He declared that the time had come to take midwifery out of the hands of the general practitioner altogether, and to establish a service of specialists thoroughly trained in obstetrics, who, working in co-operation with highly trained nurses or nurse-midwives, would be responsible for the care of the patient both in pregnancy and during delivery. Dr. LETITIA FAIRFIELD, of the Public Health Department, L.C.C., said that they were faced with the unpleasant fact that ante-natal care had not achieved its objects. Some of the lowest maternal mortality rates in the British Isles were still to be found in large areas where ante-natal care was almost *nil*. It was not always realized that one of the results of ante-natal care was to protect not only the patient but the nurse and the institution by enabling them to select cases that were potentially bad maternal risks and to send them to another establishment. That was why there was so much confusion about the results of ante-natal care as relating to certain services and institutions. There was confusion also as to the connexion between ante-natal care and malnutrition. Here again the facts were all against current fashionable theories. America had one of the highest maternal mortality rates in the world, yet the standard of nutrition there was probably higher and wiser than anywhere else. No one would suggest that proper attention should not be paid to the feeding of the mother, but it would be a mistake to think that the mortality of mothers in childbirth could be reduced by concentrating on nutrition. Ante-natal care should be regarded as a link in the chain of obstetrics, not as a stunt ; and the expectant mother as a woman, not as " an ambulant pelvis," as she used to be regarded in the old textbooks. Ante-natal care should consider the mother in her setting as a whole, and concentrate its forces on producing for her a good environment.

### FOOD STANDARDS

Other discussions of less immediate medical interest concerned games and athletics and their value to public health, the reconditioning of working-class houses, town and country planning, and hospital equipment. Dr. W. G. SAVAGE, county medical officer for Somerset, opened a discussion on food standards in view of the report of the Departmental Committee on the Composition and Description of Food. Some bodies, he said, like the Society of Public Analysts, envisaged a system of definitions and standards ultimately to embrace all articles of food, but Dr. Savage thought such a complete series of definitions was neither practicable nor desirable. He favoured an extension of definition for many articles and for certain constituents of many foods, such as the amount of fat in cheese, and limitations for carbohydrate in sausages and the like. He considered also that all food-manufacturing premises should be registered and open to inspection and sampling by the appropriate authority—the only reliable way to control purity of manufacture ; that the present position of labelling was unsatisfactory ; and that the issue of a false or misleading description should be an offence. In the subsequent discussion Mr.

L. H. LAMPITT, dealing with the chemical aspect of food control, declared the general standard of purity of food in this country to be very high. Control by standards might conveniently be established for a restricted range of products, the verification of such standards to be by accepted methods of scientific examination. But bureaucratic control engendered rules and regulations for their own sake. A representative of the manufacturers of confectionery foods, Mr. J. G. MATHIESON, said that manufacturers generally deprecated very strongly the fixing of standards, positive or negative, which could not be checked with absolute certainty by methods of analysis. Such standards put a premium on dishonesty, and no method of inspection could get over this difficulty. While standardization, so far as it had gone, had done good, he thought the Departmental Committee was wise in deciding against a hard-and-fast system of standardization applicable to every variety of foodstuff, regardless of whether any really important end was to be achieved.

## MEDICAL OFFICERS OF HEALTH AT DINNER

### THE MINISTER ON HIS OBLIGATION TO THE SERVICE

The annual dinner of the Society of Medical Officers of Health took place at the May Fair Hotel on November 22nd, under the presidency of Dr. R. VEITCH CLARK. The Minister of Health and Lady Hilton Young were the principal guests, and among others were Sir Arthur Robinson, Secretary to the Ministry, and Sir George Newman, Chief Medical Officer, Sir George Buchanan, Master of the Society of Apothecaries, Dr. E. Kaye Le Fleming, Chairman of Council, and Dr. G. C. Anderson, Medical Secretary of the British Medical Association, and representatives of other public services and affiliated organizations.

Sir HILTON YOUNG, in proposing the society's health, spoke of the pleasure with which, in his travels through the country, visiting places where the surroundings and even the language were unfamiliar, he had come upon "the friendly, comfortable face of the medical officer of health." "We meet here," he said, "with a warm sense of co-operation in the tasks we have to discharge." He testified to the number of occasions during his short term of office when the Ministry had sought, and never in vain, the counsel of the society. "The relations between centre and circumference in public health show steady improvement. If the rate of improvement has been accelerated during the last three years I shall be very proud. (Applause.) I thank you for that short round of applause, which I confess I had almost extorted, but this improvement of relations is due, not to any Minister, but to a steady growth in understanding as between the officers of the Ministry and yourselves. Those relations have definitely improved as a result of the Act of 1929, the good effects of which have been witnessed in the recent surveys carried out by the Ministry in co-operation with the local authorities."

Sir Hilton Young went on to speak of the "drive" for a reduction in maternal mortality, repeating some of the observations he had made on this subject at the Council Dinner of the British Medical Association a fortnight previously (*Supplement*, November 10th, p. 237). There was an armoury of services adequate to reduce the rate of mortality, but what was most required was that the standard of the backward areas should be conformed to that of the most progressive. He then passed on to speak of the evil of the slums, and said that it was upon the enthusiasm of medical officers that he relied to bring to an end in five years this intolerable evil. During this, the first year, 15,000 houses had been already completed for the rehousing of slum dwellers, and by the end of the year the construction of another 19,000 houses would be in sight. The rate at which the work had been carried on had steadily increased.

Dr. VEITCH CLARK, after paying a tribute to Sir Hilton Young for his keen interest in the public health service, said that he believed maternal mortality could be enormously reduced by the means already in existence, though there remained certain causal factors which could not be dealt with until research had been carried out to a much larger degree. Nothing that could be done in public health at present effectively counteracted intoxications, and until more was known about the intoxications of pregnancy that section of the mortality must remain. So far as housing was concerned, in his own Manchester what had been done in replacement during the past year would be multiplied six or seven times during the next twelve months. Dr. Clark addressed himself to the younger members of the society, whom he congratulated on living in the greatest age that public health had ever known.

Sir JOHN ROBERTSON then proposed the health of two veteran workers for the society, both of whom had held every high office in it—Dr. T. W. Naylor Barlow of Wallasey, and Dr. G. F. Buchan of Willesden. He recalled the long fight for the status and remuneration of the medical officer of health—a fight in which the society had been splendidly assisted by the British Medical Association. Dr. NAYLOR BARLOW, in a breezy reply, spoke in his turn of the value of the society, in which he had learnt the experience of other men and been able to add it to his own. He contrasted the present day of recognition with his own early experience as medical officer of health for Bootle, when there were six doctors on the town council, all of whom looked upon the medical officer of health as an interloper and of much inferior status, and when his office was a partitioned-off portion of the common reading room. Dr. G. F. BUCHAN, in his reply, said that in the science of public health there was no such thing as finality. They had to unlearn much that they had been taught, and to undo much of their teaching of others. In these circumstances perhaps it was not surprising that Ministers of Health and health committees did not always attach the same importance to their schemes that they did themselves. He regretted the frequent absence of one type of worker from a health department—namely, the research worker. Science could never be a closed book, and the health department which did not base its methods on experimental medicine and research would not make the progress that it ought.

The toast of "The Guests" was proposed by Dr. T. N. V. Potts. In replying, Dr. J. S. FAIRBAIRN said that in the double capacity of chairman of the Central Midwives Board and president of the British College of Obstetricians and Gynaecologists he saw a good deal of the medical officer of health, and from different standpoints. He had often had to tell medical officers of health that they might know a great deal of preventive medicine, but they had much to learn about preventive obstetrics. On the other hand, he found in the British College that some of his colleagues did not get the right view of the medical officer of health, whom they thought of as representing local bureaucracy. He added that he had worked for a long time for a diploma specially designed for maternity and child welfare workers, but his great difficulty had been to get medical officers of health to make any use of it. In a further reply, Sir GERALD HURST, K.C., the senior member of Parliament for Manchester, bore testimony to the work of Dr. Veitch Clark in that city, which he acclaimed as the pioneer and pathfinder in all social progress.

According to S. D. Collins and M. Gover (*Bull. Off. Internat. d'Hyg. Publique*, October, 1934), who record their observations on influenza in ninety-five towns of the United States during the winter of 1932–3, that the epidemic was one of the least important of the nine which have occurred during the period 1920–33, but was the most considerable of those since the epidemic of 1928–9. The mortality was higher in the Western than in the Eastern States. The West Southern Central States were first affected, and the disease then spread simultaneously to the west, north, and east, New England being the last to be attacked.

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# INTERNATIONAL HEALTH

During the early part of the nineteenth century the intrusions of plague and cholera into Europe led to the adoption by various countries of measures designed to arrest these infections at their port of entry. Of these measures it may be said in general that they were more rigorous than effective, and in 1851 the situation in the Levant had become so serious that a conference was held in Paris between representatives of the States interested in order to arrive at a mutual understanding on some common course of action. So far as England was concerned the official view about this time appears to have been strictly insular. The presence of cholera in the world at large was no doubt unfortunate, but the fear of it had been a strong incentive to the improvement of English water supplies and sanitation, and so the Government of the day, while not exactly welcoming the cholera, took no official action against it, but left it to the seaport towns to exercise locally such powers as they had when an outbreak threatened.

Later, in 1896, a new problem was raised by the seaborne extension of plague from Bombay. In 1897 a conference met at Vienna to concert new efforts, and in 1903 the Sanitary Conference at Paris proposed an international Convention for both plague and cholera. Except, however, the Constantinople Superior Board of Health and the Egyptian Quarantine Board, which had limited fields, there had hitherto been no standing organization to deal with international quarantine. The opinion grew that such an organization had become necessary, since only by continuous expert study and periodical meetings between representatives could the obligations which Governments should jointly assume be fixed with any prospect of success. This opinion, which took formal shape at the Rome conference of 1907, materialized in 1909, when the Office International d'Hygiène Publique began work in Paris. During the four years of war the activities of the Office were in abeyance. With the return of peace they were revived. The question then arose of the relationship of the Office to the new Health Organization, as it was called, of the League of Nations, and after sundry procedure a liaison was devised under which the two bodies would act in co-operation.

The happenings above summarized are recounted in more detail by Sir George Buchanan[1] in his Milroy Lectures, recently issued in book form. They provide a fitting prelude to his interesting review of what has been attempted and achieved in international hygiene, which he supplements in the address printed in our opening pages this week. Under the auspices of the Health Organization, as he says, the Commission on Biological Standardization has rendered important service to medicine. The Malaria Commission has thrown valuable light on the control of that disease, indicating that the methods employed must be adapted to local conditions. The Cancer Commission has made a comparative study of cancer statistics, and in connexion with radium treatment has suggested a standard nomenclature together with standard methods of case recording and the following up of treated cases. Health missions have been active in Eastern Europe, Latin America, the Pacific Islands and elsewhere, and the Far Eastern Bureau has afforded facilities for the pooling of information regarding the progress of infection in the Orient. The Office International, as a standing supervisory body, perseveres in serving the object for which it was originally brought into being. Regularly at its half-yearly sessions its members review the needs of the world according to the changing incidence of disease and the growth of epidemiological knowledge. The International Sanitary Convention of 1926 extended co-operative action to typhus and smallpox, and in the case of plague established the six-monthly examination of ships at designated ports to ascertain whether they needed "deratization"—that is, riddance of rats. The Sanitary Convention for Aerial Navigation of 1933 is another example of the progressive policy of the Office.

In the note with which he concludes the Milroy Lectures for 1934 Sir George Buchanan refers to the co-partnership between the Health Organization and the Office, and touches upon the seeming anomaly that questions which are essentially dependent on the joint action of Governments should be thus dealt with by two committees in two separate capitals. As one familiar with the work and well qualified to speak he expresses the view that there are advantages in the arrangement, and that the duplication, such as it is, gives relatively little trouble. Should, however, any question arise of further readjustment, throwing into relief competing claims by the two bodies, it seems to us that there might be much to say on behalf of the Office. Having weathered first the World War and later the coming into existence of so highly accredited a rival as the Health Organization of the League of Nations, the Office would appear to be possessed of a strong inherent vitality or power to resist administrative shocks. Such a tendency to permanence was one of the aims of those by whom the formation of the Office was first mooted. It is of signal importance to the work which it carries on, and for the purposes of that work it is linked not only with European Governments but also directly with many of their oversea dominions and possessions.

[1] *The Milroy Lectures on International Co-operation in Public Health: Its Achievements and Prospects.* By Sir George S. Buchanan, C.B., M.D., F.R.C.P. Reprinted from the *Lancet*, April 28th, May 5th and 12th, 1934.

# DRILLING IN PHYSICAL SIGNS AND DIAGNOSIS

That it is easier to instruct advanced students, or at least those who have mastered the elements of the science of medicine, than to teach students on the threshold of their long course, is generally recognized. It is often acted upon by the professor taking the introductory course of lectures and deputing his lecturers to undertake those on the more advanced aspects of his subject. In the case of physical diagnosis as a preparation for work in the medical and surgical wards this plan was formerly not adopted ; but since their institution after the war the professorial units have in general undertaken this duty, which, though a tribute to their efficiency, has added to their labours, and may have interfered to some extent with activities in research. The teaching of physical signs and diagnosis varies in method and duration. Perhaps the most important aim in these classes is to initiate what should become an almost unconscious process of routine in examination and observation. The meaning and bearing of this faculty may perhaps be illustrated by a comparison made by a junior colleague of two of his seniors: one physician remarkable for flashes of diagnostic genius, the other physician characterized by his rule-of-thumb custom of methodically examining (1) the tongue, (2) the pulse, and thus conscientiously going over the patient, but with the result that he sometimes wiped the eye of his more brilliant colleague. Lest any attempt to identify those concerned in this comparison should thus be stimulated, we may add that they have " passed beyond these voices."

Among the instructor's difficulties in successfully inculcating this mental habit of approach to clinical examination of patients is that of finding out how much his students really do see and actually feel or hear when examining the patients brought for demonstration. Realizing this to the full, Professor Logan Clendening of the University of Kansas has adopted a system whereby the students take notes detailing their observations as they make them, which the instructor then reads, and so obtains the desired insight and the opportunity of giving further help. In his pamphlet, *The Laboratory Notebook Method in Teaching Physical Diagnosis and Clinical History Recording*,[1] he sets out, in addition to a tabular scheme of note-taking, eighteen " exercises " which in some respects constitute examination papers on the cases investigated, especially with regard to the part of the body thought to be affected. Thus questions are asked such as: " Is the disorder organic or inorganic?" ; " What do you hear over the second interspace to the left of the sternum?" ; " What valve area is this?" ; and, " Is the Romberg test positive?" In this connexion reference may be made to a useful brochure by Dr. T. R. Parsons of Sidney Sussex College, Cambridge, entitled, *Lectures, Reading and Examinations*,[2] which gives much useful advice, based on experience and sympathetic understanding of the student's problems. Thus in dealing with note-taking at lectures the laborious process of making a fair copy of notes taken down at the time is strongly deprecated as merely a tedious waste of time ; and as a substitute the student is directed to leave plenty of space between the lines of the original transcript and the opposite page blank for subsequent expansions and corrections. A system of abbreviations should be invented and employed by the student, who, if possessed of a " photographic " memory, should fill his notebook with diagrams. Reading on the same subject as the lecture should follow, and also be accompanied by note-taking. Finally, as regards examinations the advice given is equally sound, and the importance of early to bed is underlined by the *obiter dictum* of a well-known coach that " every minute after 10 p.m. means a mark lost in the examination next day."

[1] *The Laboratory Notebook Method in Teaching Physical Diagnosis and Clinical History Recording.* By Logan Clendening, M.D. London: H. Kimpton. (2s. 6d. net.)

[2] *Lectures, Reading and Examinations, being Hints on taking Notes at Lectures with some Suggestions on Preparing for Examinations.* By T. R. Parsons. Cambridge: W. Heffer and Sons, Ltd. (1s. 6d. net.)

## PHRENICECTOMY

Phrenicectomy has during the last few years become a popular operation in this country. Both artificial pneumothorax and phrenicectomy are comparatively minor operations, and therein lies a certain danger that they may be practised indiscriminately, and often without careful selection of cases, on the justification that they can at least do no harm. Any new procedure is bound to go through a probationary period. In the case of phrenicectomy this period is over, and it is time that those who have had considerable experience published their results. More valuable information can be obtained by a consideration of the results in small comparable groups than *en masse*. A very useful contribution along these lines has just been published in France by Emile Sergent, Launay, Bonniot, *et al.*[3] These authors start with a review of the physiology of the phrenic nerve and the effects of its paralysis. It will be news to many that the phrenic nerve carries sensory fibres from the lumbar peritoneum, but this will explain the apparently " hysterical " association between a lesion in the abdomen and a pain in the neck. Both Sergent and Launay are strongly opposed to the routine practice of paralysing the diaphragm when an artificial pneumothorax has been indicated but has failed. In the treatment of pulmonary tuberculosis these authors are agreed that the effect of a phrenicectomy on a pulmonary cavity does not depend so much on the position of the cavity as on the character of the surrounding parenchyma. When the cavity, either at the apex or at the base of the lung, is surrounded by dense sclerotic lung tissue, paralysis of the diaphragm will not assist its closure ; when, however, the cavity is thin-walled and surrounded by a recent infiltration, considerable improvement or closure of the cavity is to be expected from this operation. Bonniot considers

[3] *Arch. Med.-Chir. de l'Appareil Respir.*, 1934, Tome IX, Nos. 1 and 2.

that an isolated cavity of the favourable type described above, and which has improved up to a point under sanatorium regime, is best treated by a phrenicectomy as a primary procedure. Undoubtedly artificial pneumothorax is not without risks, and if the same result can be obtained by a phrenicectomy it is surely the method of choice. By crushing a phrenic nerve and removing the accessory fibres a temporary paralysis is obtained, which overcomes the disadvantage of an irrevocable procedure. The authors are also against the routine practice of phrenic avulsion prior to thoracoplasty. Bonniot considers that it should only be employed when the lesion is of the type that will improve under this treatment. Thoracoplasty should then be delayed until the maximum improvement has been obtained. Sergent states that he has never seen phrenicectomy benefit cases of acute pneumonic tuberculosis. To apply it to suppurative conditions of the lung, particularly to bronchiectasis, has always seemed an irrational procedure. H. P. Nelson[1] has already given a warning against collapse therapy in bronchiectasis. The French writers consider that its results for suppurative diseases are inconsistent and unreliable, that it is definitely contraindicated where there is an active inflammatory lesion in the parenchyma, and that in bronchiectasis it provides only a temporary improvement. On the whole, phrenicectomy in pulmonary tuberculosis has given, in the carefully selected cases, very good results ; sometimes it fails in its object, but it rarely does harm. The contrary must be said of this operation in suppurative diseases—namely, that it rarely does good, sometimes produces no effect, but usually makes the condition of the patient worse.

[1] *British Medical Journal*, January 13th, 1934, p. 58.

## A RECEPTION AT APOTHECARIES' HALL

The various gatherings of public health workers in London last week culminated in a largely attended reception given on the evening of November 23rd by the Society of Apothecaries of London, to meet members of the Society of Medical Officers of Health. The guests were received in the fine old hall by the Master, Sir George Buchanan, the Senior Warden, Sir William Willcox, and the Junior Warden, Dr. J. S. Fairbairn. The early part of the evening was devoted by the visitors to an examination of the many treasures of which the society is the proud possessor. Attention was specially drawn to the licence to use the hall, granted by Charles I under the Great Seal and dated 1634. Another valued exhibit was the laboriously lettered and illuminated scroll conveying the appointment of two apothecaries to the court of Charles II. There was also a costly snuff-box given by the City of London to Edward Jenner. The principal exhibits were the old medical books, some of which had a special interest for health officers. The overcrowded title-page of one, dated from before the Great Fire, described the contents as " Certain necessary directions as well for the cure of the Plague as for preventing the infection, with many easy medicines of small charge very profitable to his Majesty's subjects. Set down by the College of Physicians." " A New Herball," dated London, 1551, in which were included " a booke of the bathes in England, in Germany and Italy," and " A Homelye Physicke Booke," created much interest, and another, described by the society's curator as one of the rarest medical books, was " An Account of the Medical Uses of the Foxglove." Others were " A Plain Philosophical Demonstration of the nature, faculties and effects of all such things as by way of nourishment make for the preservation of Health, with divers necessary observations ; as also of the true use and effects of sleep, exercise, excretions, and perturbations," by T. Venner, Bath, 1638, " whereunto is annexed an accurate treatise concerning Tobacco " ; and a volume published in 1596, written by Nicholas Monardus and " Englished by John Frampton, Merchant," entitled " Joyfull Newes out of the New-found World," and describing " things brought from the Occidental Indies which serve for the use of medicine." After the inspection of these exhibits a move was made to the Great Hall, standing unaltered, except for its Adam ceiling, from the days before the Great Fire.

## THE FATHERS OF ODONTOLOGY

The Royal Dental Hospital of London has just completed its third quarter of a century, and occasion was taken by the chairman, Mr. J. Thornton Carter, at the annual dinner of the staff and past and present students, on November 24th, to praise its founders. Odontology was gaining recognition as a science more than thirty years before the Royal Dental Hospital came into being —witness the work of Cuvier, Richard Owen, and Thomas Bell. But the institution, said Mr. Carter, started its life at just the right time and in an atmosphere where every breath was stimulating. In the same year that saw the foundation of the hospital—1858—Darwin and Wallace read before the Linnean Society their paper advocating the theory of natural selection, which was to influence the progress and direction of every branch of biological knowledge ; Michael Faraday at the Royal Institution demonstrated certain phenomena in solutions of gold—the colloidal state—which led at once to far-reaching results and to-day seemed to be opening boundless horizons ; Claude Bernard was publishing his memoirs on the pancreas and the role of pancreatic secretion in digestion ; Pasteur was publishing his paper on fermentation ; and Mendel was formulating his laws of inheritance. At that time Sharpey was professor of anatomy and physiology at University College, London, and Grant, who inspired much of John Tomes's work, occupied the chair of comparative anatomy. It was a time when every branch of science seemed to be developing broader and grander conceptions. John Tomes was an original member of the staff, and in the second year of the hospital he published the first edition of his *Dental Surgery*. Later Charles Tomes published his *Manual of Dental Anatomy*, where his chapter on the evolution of the forms of teeth remains a masterly contribution on the various factors underlying the progressive changes in dental structure. A fellow student of Charles Tomes at Soho Square was Howard Mummery, whom Mr. Carter considered to be the greatest of dental histologists These men he named as the founders of odontology, and the staff of the hospital and school had since seen an unbroken succession of distinguished names, often illustrious son

following illustrious father. Mr. Carter mentioned that during the history of the hospital there had been eleven consulting surgeons on the staff, of whom he had known eight, and there had been six deans, and he had fallen under the jurisdiction of four. That the hospital is continuing to fulfil the ideals of its founders was shown by the multitude of demonstrations and exhibitions at an "At Home" preceding the dinner, when the conservation room, the mechanical laboratory, the *x*-ray department, the orthodontic and research departments, and the museum were filled with eager exhibitors and students: it was shown also by the speech of the dean, Mr. H. Stobie, in recounting the past year's progress. One development has been the institution of a foundation scholarship at Epsom College, to be awarded to a student working for the D.D.S. degree. The Rev. A. C. Powell, head master of Epsom, acknowledged this practical compliment and hoped that in the future it would be seen that his school could turn out first-rate dentists as it had turned out first-rate doctors.

## BRITISH MEDICAL QUALIFICATIONS IN INDIA

The position created by the Indian Medical Council Act, 1933, with regard to the recognition of United Kingdom medical qualifications in India is referred to in the recent report of the Joint Committee on Indian Constitutional Reform.[1] The Act, it will be remembered, set up a medical council for the whole of India with substantially the same functions as those of the General Medical Council, and scheduled the medical diplomas granted by institutions outside British India—including the registrable qualifications of licensing bodies in the United Kingdom—which were to be recognized in India for purposes of the Act. It also provided that this schedule should remain unaltered for four years, but that the Indian Medical Council should be empowered to negotiate with an authority in any country for a scheme of reciprocal recognition of medical qualifications; that the Governor-General should be informed of the decisions of the Council to recognize, or to refuse to recognize, the medical qualifications proposed by other countries; and that the Governor-General should frame a new schedule to become effective four years after the commencement of the Act, which should comprise the medical qualifications thereafter to be recognized. Provision was also made enabling the Governor-General, after the expiration of four years, to amend the schedule and to add further qualifications or to recognize only qualifications granted before or after a specified date. The report comments as follows:

"We appreciate and sympathize with the efforts of the Indian medical profession to put its house in order, and we hope that co-operation between the two Councils will go far to ensure an amicable and agreed solution of the present difficulty. . . . We are of opinion that the Indian Medical Council Act, with only slight modifications, can be made the basis of a permanent and satisfactory arrangement. . . . But we confess that we should find difficulty in agreeing that the Governor-General is an appropriate authority for determining whether any particular qualification should be recognized. . . . We think that the true solution is to be found in an adaptation of the provisions in the United Kingdom [Medical] Act, whereby any refusal by the General Medical Council to recognize a medical diploma granted abroad may be made the subject of an appeal to the Privy Council; and we suggest that if after the expiration of four years the Indian Medical Council proposes to withhold recognition of any of the United Kingdom qualifications an appeal should lie to the Privy Council, whose decision should be final. The Act of 1886 requires the Privy Council, before giving its decision, to communicate with the General Medical Council, and there should be a corresponding provision that in the converse case there should be communication with the Indian Medical Council; but we are disposed to think that the law should be amended so as to provide that in either case both Councils should be communicated with before the decision of the Privy Council is given. We hope that before the four years have expired, as a result of joint action between the two Councils, the General Medical Council will have seen its way to restore its recognition of Indian diplomas,* and that discussions may proceed between them free from political influence or bias and with the sole object of promoting the interests of medical education in both countries."

Concerning the Indian Medical Service the report states: ". . . the members of the Service ought, by virtue of the commissions which they hold, to be deemed to possess all necessary statutory qualifications entitling them to practise."

[1] H.M. Stationery Office. 1934. (1s.)

* This recognition was withdrawn by the General Medical Council some four years ago. (See *British Medical Journal*, 1930, i, 508.)

## THE CASE HISTORY IN OPHTHALMOLOGY

From the opening paragraphs of Mr. Bishop Harman's *Aids to Ophthalmology* more than a few generations of students have become acquainted with the aphorism of the late Sir George Murray Humphry: "In surgery eyes first and most, fingers next and little, tongue last and least." Ophthalmologists, perhaps because they can see so much, do on the whole tend to listen too little, though mature experience inclines them in general to attach more and more importance to the history as given by the patient. Dr. Harald Gjessing,[1] in a paper before the North of England Ophthalmological Society, while not exactly leading a revolt in favour of the tongue as against the eye, has made a convincing plea for the lingual organ—the patient's, not the surgeon's. In stressing the value of the history and of spontaneous statements by the patient, Gjessing has drawn, charitably enough, on the mistakes he himself has made by listening too little. But no ophthalmologist will be deluded into believing that Gjessing's confession of sins does not carry the gentle reproach *de te fabula narratur*. Speaking of pain, he quotes with approval a saying of one of his colleagues, that "pain is the Lord's greatest gift to humanity: this alone makes the patient call on the physician in time." While not blind to the pitfalls awaiting the unwary in being attentive to symptoms to the exclusion of a systematic examination, Gjessing goes rather far in his interpretation of the type of pain associated with different lesions. How many ophthalmologists would subscribe to his dictum that with an ocular pain reminiscent of toothache and becoming worse during the night, especially in the early morning hours, involvement of the ciliary body may safely be diagnosed? He is on less debatable ground in stressing the value of the patient's history of subjective symptoms in glaucoma, for glaucoma still awaits physical means of early diagnosis.

[1] *Arch. of Ophthalmol.*, 1934, xii, 330.

An interesting point he makes is that some patients find that the taking of such stimulants as coffee will produce symptoms suggestive of prodromal attacks of glaucoma (which to Gjessing are really abortive attacks of congestive glaucoma). Of interest, too, are his remarks on asthenopia ; but here we feel that he is letting his enthusiasm run away with him when he subscribes to the views made popular by the late Dr. Gould in regarding Huxley, Darwin, George Eliot, Robert Browning, and De Quincey as victims of undiscovered hypermetropia. Another side of the picture is the case in which a too convincing history leads the examiner astray. Cases of cerebral tumour diagnosed as migraine come under this consideration, while a patient's emphatic belief that he has suddenly lost the sight of one of his eyes may be based on nothing more than his being forced to use an eye which he did not know was defective. Few ophthalmologists will fail to recognize their own mistakes in the case histories related in this able paper—not excluding the one in which the patient was boasting that he " had made fun of Dr. Gjessing," though to be sure a wrong diagnosis is no matter for fun, least of all when it involves, as in this case, the overlooking of a cerebral tumour.

## THE STRANGEWAYS RESEARCH LABORATORY

Twenty-one years have elapsed since the founding in 1912 of the Strangeways Research Laboratory at Cambridge as a small hospital for the treatment and study of the conditions coming under the general definition of chronic arthritis. The annual report of this institution for 1933 appropriately reviews the growth and development of the laboratory since its start. After a determined but relatively unsuccessful effort to advance towards a solution of the problem of this disease along the lines of orthodox pathology, the late Dr. Strangeways converted the wards into laboratories, and collected a small group of investigators to study the processes of normal growth and of the influences determining and affecting them. The laboratory thus became one of the earliest centres in this country to take up the artificial culture of tissues. For many years now the Medical Research Council has made grants for the support of certain members of the staff and sums totalling more than £10,000 to meet general expenses, the Royal Society has endowed a Fellowship, and private donors have given generous aid. Since the opening day in 1912 there have been eighty-four persons accommodated in the laboratory as research workers or students, and eighty papers have been published, twenty of these during the last twelve months. In 1933 there were more workers in the laboratory than in any previous year. Every room in the building is occupied, and there is urgent need for further accommodation. To such an efficient and fruitful organization have the early devoted enthusiasm and self-sacrificing struggles of Dr. Strangeways led. Since its main objective has always been the elucidation of the normal development and differentiation of growing tissues, the laboratory work has become of special interest to cancer workers. Radiation therapy holds out an increasing promise of amelioration, but for its effective and safe application there is needed a much fuller knowledge of the mode of action of different kinds of rays on normal and malignant cells. Only such a diverse and patient study of the reactions of cells cultivated in artificial isolation as is conducted in the Strangeways Laboratory can promise this. Such work may also reveal the causes of maldevelopments, and the way to their prevention or correction. Much of the current report is devoted to statements of the researches at present in progress. One investigator has shown that the growth, differentiation, and calcification of bone in endosteal cultures which are grown in plasma and liver extract from a bird deficient as regards vitamin D are considerably retarded as compared with similar cultures grown in a medium derived from a normal bird. A high concentration of calciferol has a strongly toxic effect, and almost inhibits growth. By cultivating bone in media derived from birds suffering from D-hypervitaminosis indications have been obtained that, while growth may be accelerated, differentiation is not more rapid than when ordinary media are employed. A report on the mechanism of calcification in cartilage and bone is to be published shortly. Another researcher has shown that when a fragment of the primitive streak is transplanted into the extraembryonic part of the fowl blastoderm it may induce an embryonic rudiment in the host tissue. The correlation of the glycogen and fat content of early embryonic tissues with their growth and development is being studied. It has been found that with compact bone cultures exposed to radium rays filter disks of various substances are more protective when placed 3 to 4 mm. from the explant than when close to the preparation. This effect has not yet been seen with powdered or cancellous bone, and the unexpected result is being investigated more intensively. Gamma rays do not seem to interfere with the rate of progress of mitosis of living dividing fibroblasts. With its fine record of achievements in the past and its present energetic progress, the laboratory, which has already won high commendation at home and abroad, may confidently look forward to an increased measure of support, which will enable it to fill even more adequately its most valuable part in the field of developmental histology.

## FOOD-POISONING BY DUCKS' EGGS

W. Fromme[1] reports on nineteen outbreaks of food-poisoning occurring during the past two or three years in the Ruhr district of Germany due apparently to the consumption of ducks' eggs. Ninety-nine persons were affected, and four of them died. *B. aertrycke* was responsible for fifteen and *B. enteritidis* Gaertner for four of the outbreaks. Clinically the picture was usually of the acute gastro-enteritis type, but mild attacks were very common, and sometimes a paratyphoid-like fever developed after an incubation period of a few days. In no fewer than seven of the outbreaks the vehicle of infection was a potato salad with mayonnaise made from ducks' eggs. As a rule the eggs were used raw, but in some outbreaks they had been boiled, fried, or heated lightly. Inquiry showed that imported eggs from Holland were responsible for most of the outbreaks, though some were due to eggs laid locally. Nearly all the infected eggs appeared to have come from one breed of duck—the Khaki-Campbell—though

[1] *Arch. f. Hygiene*, October, 1934.

Indian runners were definitely incriminated in one outbreak. Infection is apparently very common in duck establishments in Holland, where sometimes as many as 80 per cent. of the young ducks are stated to have died of epidemic disease. The eggs are often contaminated on the outside with faeces containing the causative organism, so that disinfection of the shell may diminish the risk of human infection. But in some eggs the interior is also infected, and even cooking cannot be relied upon to render them safe. One of the most important preventive measures is to institute a proper bacteriological control over duck farms.

### DIPHTHERIA IMMUNIZATION IN LENINGRAD

P. F. Sdrodowsky[1] has recently reviewed the results of compulsory immunization against diphtheria of 158,246 children aged 1 to 7 years. The anatoxin used was prepared in Leningrad according to the Pasteur Institute methods, and contained on the average eight to twelve antigen units per cubic centimetre. The complete course of immunization consisted of three injections: 0.5 c.cm., followed in twenty days by 1 c.cm., followed in fifteen days by a further 1 c.cm.—giving a total of twenty to thirty antigen units. The serological effectiveness was tested by the Schick reaction in 3,699 immunized children ; it was found negative in 90 per cent., doubtful in 4 per cent., and positive in 6 per cent. A control group of 224,568 children was not immunized. In the immunized group 12.8 children per 10,000 subsequently contracted diphtheria, while in the control group the morbidity rate was 119.7 per 10,000, or 9.73 times higher. The mortality rate was 0.28 per 10,000 in the immunized group and 7.88 in the control group. Intensification of the immunization by raising the antigen content of the anatoxin gave still better results as regards both serological effectiveness and the morbidity and mortality rates. On the basis of this mass experiment the author strongly advocates wider adoption of compulsory diphtheria immunization.

### GENERAL MEDICAL COUNCIL ELECTION

The result of the voting in the recent election of a direct representative for England upon the General Council of Medical Education and Registration of the United Kingdom was as follows: Sir Henry Britten Brackenbury, 9,317 votes ; Dr. Edward Andrew Gregg, 2,665 votes ; Dr. Mabel Lida Ramsay, 2,346 votes. Sir Henry Brackenbury has accordingly been elected a member of the General Medical Council representing the registered medical practitioners resident in England, for a period of five years from January 1st, 1935.

The Thomas Vicary Lecture will be given at the Royal College of Surgeons of England by Professor William Wright on Thursday, December 6th, his subject being "Galen and the Eye." The Bradshaw Lecture, on "The Functional Derangement of the Intestine that follows Abdominal Operations," will be given by Mr. Victor Bonney on Thursday, December 13th. Both lectures begin at 5 o'clock.

[1] *Arch. of Biol. Science*, 1934, xxxv, 123.

## A LANDMARK IN NEUROLOGY

### JUBILEE OF FIRST OPERATION FOR REMOVAL OF CEREBRAL TUMOUR

In celebration of the jubilee of the first operation for the removal of a cerebral tumour (which was performed by Sir Rickman Godlee at the Hospital for Epilepsy and Paralysis, Maida Vale, then in Regent's Park, on November 25th, 1884) a lecture was delivered under the auspices of that hospital by Mr. WILFRED TROTTER in the Barnes Hall of the Royal Society of Medicine on November 27th. Dr. WILFRED HARRIS presided over a distinguished company of neurologists and others.

Mr. Wilfred Trotter began with a comment on the custom of ceremonial commemoration of past events. Such celebrations, he said, were apt to lead to a loss of proportional emphasis unless the attitude of approach were clearly defined. It was desirable to beware of any strong tincture of that antiquarian spirit which delighted in the doings of a past generation just because they were old-world and quaint. The pious laudation of departed greatness was a good exercise in its place, but perhaps it was desirable to recall Samuel Johnson's remark that a man was not on his oath when framing an epitaph. Nevertheless, such commemorations had their value. The immediacy of contemporary events concealed their full quality and outline. It was only past events that could be seen as part of the pattern of things with an approach to substantial reality.

#### THE GOLDEN DECADE

The lecturer went on to place in its time-setting the event which was being commemorated. Fifty years was well within living memory, yet what a gulf between 1884 and now. The middle 'eighties were the richest period of the Victorian era. The warm, tranquil air of security of that age closed around us. Its stability was embodied in the everlastingness of its central figures—Victoria, Gladstone, Bismarck. The British Empire was soon to gain its voice, which it did at the jubilee of 1887, and by the diamond jubilee ten years later that voice had already become a little strident, and the light was perceptibly that of evening, with the shadows long on the ground. But the golden decade of the 'eighties seemed in memory bathed in the timeless light of a summer afternoon, though there were occasional rumblings on the horizon, and at the very time when this group of doctors were watching their patient with declining hopes, General Gordon in the Sudan was facing a doom as inevitable as the sick man at Regent's Park.

The story of the surgical event had lately been retold by Sir D'Arcy Power. The patient was a man of 25, who for three years had shown symptoms which pointed to tumour of the brain. He had Jacksonian attacks, and three months before admission to the hospital he had had to give up his work owing to the uselessness of his left arm. He suffered from severe pressure symptoms, intense headache, and uncontrollable vomiting. Diagnosis was made of a tumour, probably of minimum size, involving the cortex of the brain, and situated in the middle part of the fissure of Rolando. The patient was intelligent enough to understand and brave enough to accept the course proposed by the doctors. The tumour was removed in an operation in which one cerebral convolution was exposed—the ascending parietal as was afterwards proved—and was found to be a glioma about the size of a walnut.

The immediate effect of the operation was satisfactory. Most of the symptoms were relieved, and intelligence was fully retained. It was thus proved for the first time that without the least external abnormality a lesion of the brain substance could be removed, leaving the general functions of the brain unimpaired. Complete success, however, was denied the surgeons ; an infection of the wound occurred, and death followed after four weeks. If these pioneers were unfortunate in their efforts to exclude infection, they were fortunate in having as their first case one in which the neurological and anatomical localization of the lesion could be made so brilliantly exact.

### Godlee, His Contemporaries—and the Patient

The patient was under the care of Hughes Bennett and Rickman Godlee, and there were also present at the operation Ferrier and Hughlings Jackson. Bennett seemed to have been the thoroughly competent son of a distinguished father, Hughes Bennett of Edinburgh, who incidentally introduced the use of cod-liver oil. Godlee at the time of the operation was in his early prime. He had been on the staff of University College Hospital for seven years, and was to serve it for thirty more with characteristic punctuality, assiduity, and never-failing loyalty. It was the healthy tradition of the students at that hospital to look upon their seniors with an unsentimental and not too indulgent eye, but the greatness of Godlee could not fail to impress itself. They saw him as he was, and he saw them as they were—and did not always conceal the result of his observation. His precise, patient, and extremely lucid teaching was invaluable, not only for its excellence, but for the regularity with which it was dispensed, even in his busiest years. He was never harsh, but his confidence was difficult to win, and he was an exacting chief. The lecturer said that he could speak only for one of his pupils, but it took that one quite a long time to guess at the sensitiveness and personal humility which he concealed from the world by means of a tongue always clever and sometimes a little cruel.

It was scarcely possible to estimate the quality of Godlee without a glance at the men who were his contemporaries—Barker, his senior by one year, and Horsley, his junior by seven. The jubilee year of Queen Victoria—at whose express wish Victor Horsley bore his first name—was marked by notable events, but by no event more notable, though to the general public quite unregarded, than the first removal by Horsley of an accurately localized spinal tumour. Horsley's mind concentrated on special problems, though, when he chose to use it, he had an extraordinary flair for all clinical matters. Godlee, on the other hand, was a single-minded clinician. For him the task of the surgeon was to teach the practice, the established doctrines, the rules of the art. His attitude to surgery was, therefore most certainly, in the best sense, academic and authoritarian.

It was paradoxical that a man such as Rickman Godlee should have been engaged in the daring adventure that attack on a cerebral tumour must then have seemed, and no doubt Godlee approached it with at least all the qualms any conscientious surgeon must have felt. He would be sustained, however, by the knowledge that he possessed two very special qualifications. In the first place, as the nephew of Lister, he would feel able to apply the new antiseptic doctrine in all its purity, might even feel an almost apostolic mission to demonstrate its value in the unknown region of the brain. In the second place, the knowledge that he was a highly competent anatomist must have encouraged him in the difficult task of finding his way through such an operation. "It is pleasant to think with what relief and pride the young, conscientious, and perhaps not very self-confident surgeon must have concluded an operation that so brilliantly justified every expectation and so generously rewarded every effort." No such happy combination of circumstances seemed to have befallen Godlee again. Whatever satisfactions he was to enjoy he was not to experience any more the exultation of leading a forlorn hope.

One other person was present at the operation—indeed, his presence was indispensable at all operations, though he was usually designated by initials—namely, the patient. In this case he was young, intelligent, and courageous, and he was to die. His name was Henderson, a native of Dumfries. "I feel a pious satisfaction," said Mr. Trotter, "in being able to add the name to the exiguous roll of those by whose misfortune or endurance the world has directly gained. It is a strange defect in medical history that so few of the names of these benefactors have been kept. To the high professional spirit the mention of such names may be trivial, even a little ludicrous, but let us not forget that these are the names of those who have borne more substantial witness than philosophers or theologians that all suffering is not in vain."

### The Evolution of Brain Surgery

It remained only to discuss the special context of the event. This first operative removal of a localized cerebral tumour marked the convergence of two distinct processes—the evolution of operative surgery on the one hand, and of neurology on the other. The first essential fact of an operation was that it should be anatomically and physiologically possible. In that way originated most of the classical operations—amputations and excisions which were in essence anatomical, without primary orientation to any disease. Afterwards it became possible for the operation to be oriented specifically for a given lesion. Hence the full development of operative surgery was strictly dependent on pathology. At one time—by the middle of the nineteenth century—surgical pathology had got far ahead of surgical treatment. It seemed doubtful at that time whether wound infection would not bring surgical progress to a standstill. The Listerian system abolished that anomaly, and there was an immediate harvest of success. But where surgical pathology had made little or no progress, there the antiseptic method could gain little or no immediate result, as, for example, in abdominal surgery until near the end of the nineteenth century, and thoracic surgery until the beginning of the twentieth. It was the good fortune of surgery of the brain that it came at a time when everything converged—when there was no tendency for operative inventiveness to outrun pathological foundations, as happened in other fields occasionally.

The lecturer concluded with a reference to Hughlings Jackson and David Ferrier. He reminded the audience of the classic contributions to neurology which both these men had made in the early 'seventies, and without which the operation commemorated would not have been possible. They it was who were responsible for the vigorous neurological expansion of that period. He could not forego adding that Ferrier's great paper, which gave a great impetus to the whole study and confirmed the clinical work, was published in the Clinical Report of the West Riding Lunatic Asylum for 1873—the crudeness of the name of the institution reflected the then backward state of psychiatry. In that paper Ferrier expressed his thanks to the medical director for placing at his disposal the liberal resources of the laboratory in which he had done his work. Sixty-one years later Mr. Trotter found himself in one respect following in Ferrier's footsteps, in expressing thanks for the help accorded him to that same distinguished physician, now Sir James Crichton-Browne. He was informed by Sir James that, although not himself present at Godlee's operation, he was acquainted with the case both before and after it, and was well qualified by his familiarity with the patient's native place to test his memory. Sir James was the author of a letter in the *Times* which pointed out the direct dependence of the operation upon the results of animal experiment, and which led to some controversy.

"We have been engaged," said Mr. Trotter, "in recalling one of the victories of the human spirit over chaos, and as we take leave of the battlefield we may note that, as in other famous victories, the disposition of forces is not exactly what we might have supposed. The operation involved three great principles—the antiseptic system, the precise projection of the cerebral markings on the surface of the skull as a preliminary to operation, and the doctrine of exact localization of cerebral function. Two of these have long been abandoned by the surgeon, and I should be sorry to define the present position of the third. Nevertheless, each has left a substantial legacy in which the invigorating influence of surgical neurology remains perennial. Thus, though we might hesitate to fight a similar battle to-day under the guidance of these champions, we may yet believe that the event we commemorate is a world event, and worthy of our respectful celebration."

A vote of thanks to Mr. Wilfred Trotter was moved by Dr. Robert Hutchison, president of the Royal Society of Medicine, who expressed appreciation of an address marked by philosophic insight, humour, and literary charm.

## COMMEMORATION DINNER

A company of over one hundred and fifty attended a commemoration dinner, which was held on the same evening at the Dorchester Hotel, Park Lane, under the chairmanship of Lord HORDER. Among the many distinguished people present the outstanding figure was the veteran Sir James Crichton-Browne, whose ninety-fourth birthday occurred this week, and who was the sole survivor of those concerned with the operation which those present had met to celebrate. Each guest was provided with a facsimile of the *Lancet* page on which a description of the operation was printed fifty years ago.

After the toasts of the King, the Queen, the Prince of Wales, and other members of the Royal Family had been proposed by the chairman and duly honoured, Dr. WILFRED HARRIS proposed the toast of "The Memory of Sir Rickman Godlee," which was drunk in silence.

Dr. Harris recalled that Sir Rickman was a nephew of Lord Lister, and had early become imbued by the principles of antiseptic surgery introduced by his uncle. The operation which he performed had demonstrated that the human brain was no pulpy indeterminate mass outside all surgical intervention, but an organ of definite localizable functions and amenable to operation like other parts of the body. Cancer of the brain was a disease previously believed to be hopeless from the start: it was now a very different proposition.

Sir JAMES CRICHTON-BROWNE, whose delivery was exceptionally striking and virile, responded to the toast. He said that Sir Rickman Godlee's operation had opened up new vistas of hopefulness to those hitherto doomed to misery and darkness. He himself had determined at the time that such an epochal event should not be buried in the pages of the medical journals, and it was he who, under the anonymity of "F.R.S.," had written a letter about it to the *Times*. The result had been a tremendous controversy, which had evoked sixty-four letters and two brilliant leading articles in support of the scientific position. This controversy had raged for three months, and he could scarcely recall any non-political discussion in the *Times* which had attracted so much attention. A number of distinguished men had taken part in it, and, despite the bitter attacks of the anti-vivisectionists, the new brain surgery had made its way. The medical profession was quick to realize that many previously obscure brain lesions could be diagnosed with precision, and that under strict aseptic precautions the brain was not inviolable. While on this subject the speaker referred to an operation recently performed by Dandy in America in which the whole of one cerebral hemisphere had been removed. He added, amidst laughter, that such procedures suggested that the brain was a rudimentary and superfluous organ. From an apt quotation from Shakespeare Sir James passed to a consideration of the thousands of lives which were nowadays saved as a result of the removal of cerebral tumours, and the thousands of men and women who were saved from suffering and disability. He understood that the mortality had been reduced from 100 to 12 per cent. Despite the dubious probings of the psychologists, however, we had not advanced towards a solution of the workings of the mind.

Sir CHARLES BALLANCE, who also responded, said that he had been asked to say something of the surgery of sixty years ago. He traced the history of brain surgery, and paid a special tribute to the experiments of Ferrier and Lister, which had made possible the performance of Sir Rickman's original operation.

The toast of "The Hospital for Epilepsy and Paralysis" was proposed by Lord Horder, who gave an interesting and humorous account of the development of neurology and brain surgery.

Dr. ANTHONY FEILING, who replied, described the growth of the hospital and its present needs, and paid a tribute to Hughes Bennett, who diagnosed the tumour for which Sir Rickman Godlee operated.

Mr. H. W. BURLEIGH, the secretary of the hospital, made a popular speech, while Professor LANGDON BROWNE proposed the toast of "The Chairman," to which Lord HORDER briefly replied.

## RESEARCH ON ASTHMA

The annual "Report of Progress" of the Asthma Research Council for the current year[1] summarizes the work which has been done in the various hospital clinics up to October 31st, 1934. In a foreword the chairman, Lord Greenway, notes a year of substantial progress, and states that the patients who attend the clinics are receiving treatment which, though it does not often cure them, almost invariably gives a measure of relief. It is announced that subscribers are being presented this year with a pamphlet on physical exercises for asthmatics; also that a summary of the research work done under the auspices of the Council since 1927, and written by Sir Humphry Rolleston, is shortly to be circulated.

At Guy's Hospital an analysis of 500 case histories by Dr. L. J. Witts has emphasized that the most striking difference between the asthmatic and the normal person is the high incidence of protein hypersensitivity and the frequency of upper and lower respiratory lesions in the former. The value of skin tests has been strengthened by the experimental work of Dr. R. S. Bruce Pearson, which has incidentally demonstrated the superiority of the intradermal over the scratch technique. It is interesting to note here that positive reactions are not infrequently found in normal people and that in asthma the results of treatment fail to exert any appreciable effect on the skin tests. Dr. Bray affirms that, judging from skin tests, the majority of asthmatics are sensitive in varying degrees to several proteins which they are constantly breathing. These include house dust, feathers, orris root, pollens, horse and other animal hairs. Courses of inoculation of oily and watery solutions of these substances plus adrenaline have given very favourable results in reactors, especially with the former and in the predominantly nasal cases, while attempts have also been made to desensitize patients by inhalation methods. As regards hay fever, it is in future intended to treat patients against factors other than those connected with pollen. Other subjects studied during the year have included food allergy and the psychological approach to asthma. The latter shows that the level of intelligence in asthmatic children is superior to that in normal children, and, further, that asthma tends to occur among those who are over-protected and fussed by their parents. Finally, the assessment of results from the various treatments is being continued by Drs. E. T. Conybeare and L. J. Witts, and it has emerged that the general tendency of those patients seeking medical advice is towards improvement irrespective of the treatment prescribed. The general impression gained from the work at Guy's seems to be that protein hypersensitiveness and respiratory damage are the stimuli which make manifest a biochemical difference between the asthmatic and the normal, a difference which should be susceptible of simple treatment.

At St. Mary's Hospital increasing use has been made of a vaccine in which the organisms are such as have withstood the bactericidal action of the patient's blood against which they have been tested. In hay fever injection of large doses of grass-pollen extract has continued to give relief in nearly 100 per cent. of cases. Skin-test control is used, the criterion of desensitization being a negative skin reaction.

The Clinic at Leeds General Infirmary records continued satisfactory results in asthma from non-specific desensitization with liver extract. Campolon or hepatex is administered intramuscularly with an initial dose of 0.5 c.cm., increased to a maximal of 5 c.cm.

At King's College, London, Dr. D'Silva has continued his studies on adrenaline, which, as stated in the previous report, has been shown to cause a large increase in the blood potassium of animals. It is thought that this great release of potassium is not without significance in the relief of asthma by adrenaline, though the administration of potassium salts by Dr. Moll of Leeds has apparently failed to produce the clinical results which might have been anticipated.

[1] Copies obtainable gratis from the Secretary, Asthma Research Council, c/o King's College, Strand, W.C.2.

At the Charterhouse Clinic Dr. Gilbert Scott has been investigating "wide-field" *x*-ray therapy in asthma. Small doses of medium-wave-length *x* rays irradiating the whole body, but excluding the thorax, are used, and though a number of successful cases have been recorded, lack of a method of controlling the dosage has always been felt. By means of serological examinations before and after treatment it is thought that a selection of the best type of case can more easily be made. At present the non-infective allergic case responds most satisfactorily.

The Asthma Research Council emphasizes its dependence upon voluntary contributions for the continuation of the work so far carried out.

## IMPERIAL CANCER RESEARCH FUND

### ANNUAL MEETING

A meeting of the general committee of the Imperial Cancer Research Fund was held at 8, Queen Square, Bloomsbury, on November 22nd, under the presidency of the DUKE OF BEDFORD.

Sir HUMPHRY ROLLESTON, chairman of the executive committee, in moving the adoption of the thirty-second annual report of the Fund for the year 1933–4, remarked that the subjects dealt with were highly technical, and ranged over the whole field of cancer research: pathological anatomy and clinical behaviour, cellular structure, carcinogenesis, and radiotherapeutics. The papers summarized by the director in the eleventh scientific report published with the annual report would no doubt receive attention by specialists in due course.

#### TRIBUTE TO THE DIRECTOR

In the course of an appreciation of the work of the director, Dr. J. A. Murray, F.R.S., who will retire from that post in November, 1935, Sir Humphry Rolleston said that Dr. Murray's connexion with the Imperial Cancer Research Fund dated from 1903, when the laboratory accommodation was very modest. Together with Dr. E. F. Bashford he laid the foundation for the experimental investigation of cancer by proving that cancer was not confined to man, but was a disease to which all vertebrate animals were subject, and that it presented the same essential features in all the different species. The discovery of Professor Jensen of Copenhagen was at once applied to the study of cancer in animals so extensively and so successfully that within a few years research institutes for the experimental investigation of cancer were being organized all over the world.

"The material collected by Dr. Bashford and Dr. Murray in those early years on the natural incidence of cancer in mice has provided investigators with a knowledge of the disease in that species equal to that in man. It enabled Dr. Murray subsequently to demonstrate the hereditary factor in the incidence of the disease. His study of the early stages of the process of transplantation confirmed the findings of Jensen, and established the important fact that the experimental transmission of the disease represented actually a transplantation of living cells, and was not due to an infection of the new host by some agent separable from the cells. Peyton Rous's subsequent discovery of tumours of the fowl which can be transmitted without the intervention of living cells has led to numerous reinvestigations of Dr. Murray's early work, which have served only to confirm it. Of equal importance are his investigations on the phenomenon of immunity, which renders a normal animal resistant against the transmission of the disease by transplantation.

"In 1915 Dr. Murray was appointed director of the Fund, and as soon as the war was over he began an investigation into the claims made by Professor Yamagiwa and his colleagues that cancer of the skin could be produced experimentally by the repeated and prolonged application of tar to the skin. As a result of this work Dr. Murray was the first observer in this country to verify the statement and to study the development of malignancy in all its phases.

"Dr. Murray's extensive knowledge of the biology and morphology of the cancer cell has been of the greatest value in enabling him to criticize the numerous spurious claims which have been made concerning the cause or the cures of the disease, and thus to protect not only the public but also the medical profession. He has always placed not only the animal material of the laboratory, but also his knowledge and shrewd judgement, at the disposal of his medical and scientific colleagues, and his advice has been much sought after by other investigators.

"During his directorship Dr. Murray has maintained the tradition of the Fund for sound, patient, and careful work which this institution has enjoyed since its inception, and which has given it a leading place among the numerous institutions devoted to the study of cancer throughout the world."

The motion was seconded by Professor W. BULLOCH, F.R.S., and was carried unanimously.

#### WORK OF THE FUND

The PRESIDENT, from the chair, moved that the best thanks of the meeting be given to the chairman and members of the executive committee, the subcommittees, the honorary treasurer, and others. He said that in the early days of its existence the Fund was practically the only institution carrying out cancer research work on experimental lines, but now there were many other bodies, not only doing similar work, but also appealing for money to carry on their work. It was therefore only natural that the financial support of the public should be divided among all of them. He would, however, like to repeat the statement contained in the treasurer's report for the year explaining the difference between this Fund and other institutions: "It was founded as a research centre to be entirely independent of hospitals or medical schools, with its own laboratory and a permanent staff of scientific investigators engaged *solely* into research into the causes, prevention, and cure of cancer." It was the only institution of its kind in this country. It began in two rooms placed at its disposal by the Royal College of Physicians and the Royal College of Surgeons. Its staff numbered two, with one or two technical assistants. Now the Fund had a permanent staff of seven scientific men, each skilled in his own particular branch of the investigations, and a technical staff of seventeen; the premises had been enlarged to two floors of the Examination Hall, and in addition a farm and laboratory at Mill Hill. Even these premises were no longer adequate for all the work that was being done. The director and his staff were frequently consulted by other investigators, both scientific and clinical, and the Fund had, from the very beginning, been particularly careful to protect the public against misleading claims of alleged cures for cancer by its careful investigation of all the claims submitted to it. Though progress might seem to the lay mind to be excessively slow, much knowledge of importance had been gained of the nature and treatment of the disease. As in other problems of medicine, patient research would ultimately reap its reward in the cancer problem, and the Duke of Bedford expressed the hope that the public would continue to support generously the work being done in the laboratories of the Fund. In conclusion, he endorsed the tribute already paid to the director, Dr. Murray, for the excellent service he had given during the past twenty years as director of the Fund.

Sir John Rose Bradford, Professor W. Bulloch, and Professor A. E. Boycott were re-elected members of the executive committee. Professor E. H. Kettle was elected a member of the general and executive committees, and Professor E. Mellanby, secretary of the Medical Research Council, a member of the executive committee. The meeting closed with a warm vote of thanks to the Duke of Bedford for his presence in the chair and his great interest in the success of the Fund.

Reference to the annual report of the Fund and the director's scientific report for the past year will be made in an early issue.

# Scotland

## Finlayson Memorial Lecture

The history of the prevention of malaria formed the subject of the Finlayson Memorial Lecture delivered to the Faculty of Physicians and Surgeons in Glasgow on November 19th by Sir Malcolm Watson, director of the Ross Institute in the London School of Hygiene. The lecturer said that work in Malaya had proved that when malaria was removed the number of deaths from other diseases was also reduced ; this showed the lowering effect of malaria on the general health of a people in allowing other infections to establish themselves. In 1904 the Malay Government had undertaken anti-malarial work on fifty square miles of intensely malarial swampy land with complete success. On the estates of one company no case of malaria in a European had been contracted since 1912, and during the last five years the admissions for this disease among the labourers had been 0.1 per cent. It had been realized in 1909 that malaria in hill land presented a special problem, since it was due to a mosquito that lived in running water. Success had been obtained by putting streams and springs in underground pipes, and in certain parts of the country by preserving jungle or swamp or growing shade, an opposite method to that which was required to combat malaria on low-lying flat land swamps. During researches on the biology of various forms of mosquito it had been found possible to control species by altering the chemical composition of water, and this had now become a recognized procedure in different parts of the world. By raising or lowering the salinity of water dangerous mosquitos had been eliminated in places as far apart as Java, Albania, and Holland, and malaria had been driven out by these slight chemical changes. Through this discovery great engineering works, such as the Singapore waterworks, the Perak hydro-electric company's dam, the naval base at Singapore, and the great Zambesi bridge had been undertaken, with almost no loss of life from disease, instead of a death rate of 200 per 1,000 with great delay in construction and greatly increased cost. The speaker had calculated that by 1920 Ross's discovery regarding the transmission of malaria had been instrumental in saving about 100,000 lives in Malaya. In Singapore anti-malarial work was begun in 1911, and there was reason to believe that over 100,000 lives had been saved by sanitary methods in that city alone. A great work had been done at Havana and Panama by the American Government ; in India research on Malayan lines had been undertaken since 1924, and the Ross Institute had created a great organization to assist the tea and other industries. The health of both Europeans and Africans in Northern Rhodesia had been improved ; the death rate among Europeans had fallen from 23 per 1,000 in 1929 to 5 per 1,000 in 1933, and that among African natives from 30.9 in 1930 to 5.2 in 1933. In the work on the Zambesi bridge, just completed, only two Europeans had fallen ill from malaria, and these had contracted the disease away from the site of the bridge ; yet this area had been one of the most unhealthy in the world.

## Extension of National Health Insurance

The memorandum of evidence submitted by the Scottish Association of Insurance Committees to the Departmental Committee on Scottish Health Services, which has now been published, emphasizes the demand for extension of the national health insurance scheme to dependants of insured persons. It is pointed out that the worker is greatly handicapped by a scheme which entitles him alone to treatment, while illness among his dependants must be treated either by the public assistance medical officer or must result in bills which he has difficulty in meeting. It is also insisted that in any general scheme the family should for medical purposes be treated as the unit. There are now fifty-four insurance committees, including thirty-one county and twenty-three borough committees, and these deal with about 1,873,000 insured persons. Of the latter about 44 per cent. are resident in Glasgow and the three contiguous counties. Of the total number at the beginning of the present year, 1,757,000 insured persons were members of approved societies, 16,500 were deposit contributors, 3,500 were exempted persons, and 153,000 came within special classes, such as married women and persons over 65. The cost of administering medical benefit amounted to £50,000 per annum, or about 6½d. per insured person. Chemists to the number of 1,632 with 1,837 shops were under contract with the Scottish insurance committees, while the number of practitioners under agreement with them was 2,039. In the majority of areas every general practitioner was on the panel list, although in larger towns some were not. The number of insured persons whom a doctor might have on his list was limited to 2,500, but certain committees reduced the figure to 2,000, and in some instances to 1,500. About two-thirds of the doctors in county areas had under 500 persons on their lists, while in the boroughs only one-third of the doctors had fewer than 500. The report expresses the opinion that medical benefit under the Insurance Act has been amply justified. A much-needed extension, however, would be the inclusion for health purposes of young people from the date of leaving school to the age of 16, and expert and specialist medical advice and treatment should be provided as well as laboratory services.

## Retirement of Dr. R. B. Campbell

At the last quarterly meeting of the Joint Committee of Stirling District Mental Hospital intimation was received of the resignation of Dr. Robert B. Campbell, F.R.C.P. Ed., from the post of medical superintendent. Dr. Campbell was appointed medical superintendent of the Inverness District Mental Hospital in 1904, after having held posts as assistant superintendent at Montrose Royal Asylum and the Crichton Royal Asylum, Dumfries. He took up his duties at Stirling in 1908. In 1932 he was elected president of the Royal Medico-Psychological Association of Great Britain, and is now chairman of the Scottish Asylum Pathological Scheme. It was decided to defer taking steps to appoint a successor until the beginning of next year.

## Diphtheria Immunization

The Public Health Department of Edinburgh is inviting practitioners to co-operate in an attempt to undertake the immunization of all children in the city below the age of 5. It is pointed out that during the last ten years the average annual incidence of diphtheria in Edinburgh was 781 cases, and the average number of deaths forty-seven. An attempt has been made to reduce this incidence by carrying out diphtheria immunization in schools. Each child when it first began school was given a consent form and an informative leaflet to take home to its parents. When consent was granted the children were given three injections of 1 c.cm. of diphtheria toxoid at fortnightly intervals. Further, a certain number of children under school age were brought by their parents for immunization, but there was no doubt that the vast majority of children of the pre-school age group had not yet received the benefit of protective inoculation. Seeing that the disease was most prevalent and most fatal in this pre-school period, it was essential that an effort should be made to immunize as many as possible. It is now

proposed that diphtheria toxoid should be provided free of charge to practitioners willing to immunize in their private practice children over 1 and under 5 years, and that a fee of 7s. 6d. per child should be paid on intimation to the health department that the requisite injections have been completed. Supplies of formol-toxoid are obtainable in 1 c.cm. ampoules from the Public Health Department, Johnston Terrace, Edinburgh.

### Appointment to Metropolitan Police College

The authorities at Scotland Yard have decided to institute a scientific laboratory at the Metropolitan Police College at Hendon, and have appointed Dr. James Davidson as its head. Dr. Davidson graduated M.B., Ch.B., at Edinburgh University in 1920. During the war he served in the medical branch of the Royal Navy, and after graduation acted for a period as resident physician in Edinburgh Royal Infirmary, and later was appointed assistant pathologist to the institution. Subsequently he was appointed lecturer in morbid anatomy in the University of Edinburgh, with charge of the post-mortem department in the Royal Infirmary. He has made numerous contributions to problems dealing with the scientific aspects of medicine and pathology.

## England and Wales

### Classification of Inmates in Public Institutions

The London County Council has been considering the classification of the inmates of its public institutions. At present the public assistance institutions contain a number of public health cases, and vice versa. Differences in terminology and in classification of inmates have been inherited from the boards of guardians; thus persons classified in one union as infirm would in another fall into the category of chronic sick. "Able-bodied" has in some cases meant all who were able to attend the dining hall for meals; in others only those fit for work. It has been decided that inmates or patients to whom the primary approach should be medical (that is, those who should be seen, examined, and supervised by the medical officer without request by the inmate or by an attendant) should be under the control of the Hospitals and Medical Services Committee, and those who were in need of assistance because of destitution, and did not fall within the former category, should be under the control of the Public Assistance Committee.

The following categories of inmates or patients will therefore fall under the control of the Public Assistance Committee: (1) able-bodied (that is, persons physically capable of work); (2) healthy (that is, able to look after themselves, including healthy aged, healthy deformed, healthy feeble-minded, and expectant and nursing mothers); (3) infirm (that is, persons requiring a certain amount of assistance in dressing or moving from room to room, and who may require in bad weather to spend a few days in bed); (4) healthy children of 3 years or over, pending transfer to schools; and (5) healthy infants, except infants separated from their parents. The following categories will be placed under the control of the Hospitals and Medical Services Committee: (1) chronic sick (that is, persons suffering from any specific disease necessitating their confinement wholly or practically wholly to bed, also extremely aged persons confined to bed on account of extreme weakness); (2) mental cases; (3) maternity cases; (4) sick children; and (5) sick infants and healthy infants separated from their parents. The most important consideration is: What are the primary needs of the classes under consideration? The first need of the infirm class is suitable accommodation, though individuals may need medical care from time to time. On the other hand, for the chronic sick and for persons whose conditions of health may vary considerably in the course of the year, medical care and nursing are the primary requisite, and suitable accommodation an adjunct thereto.

At the end of last winter there were about 4,700 public assistance cases being cared for in public health institutions, and about 1,600 public health cases in public assistance institutions, so that reclassification implies an ultimate net increase of about 3,000 beds in the accommodation under the management of the Public Assistance Committee. As from December 1st, admissions by relieving officers' orders of chronic sick cases will be to public health establishments, and of able-bodied, healthy, and infirm cases to public assistance institutions. Hitherto, cases admitted on such orders have been sent to the institution which formerly belonged to the parish or union in which they reside, without reference to the question whether it is the appropriate institution under the scheme of classification.

### Health and Cleanliness

Next year will see the centenary of local government, a fact which lends particular interest to the sixth annual luncheon of the Health and Cleanliness Council, held at the Holborn Restaurant on November 21st, with the president, Dr. G. F. Buchan, in the chair. More than 160 people, representing local health, education, and insurance committees, schools, health societies and other organizations connected with national health, and the Press, were present. In proposing the toast of the Health and Cleanliness Council, Dr. James Fenton, chairman of the Central Council for Health Education, said that one hundred years ago this country was without even the rudiments of a public health service. The nation's wealth and property were protected, but the nation's health was nobody's concern. But in 1834 there were increasing signs of a change in the national consciousness regarding this important subject, which culminated in the Public Health Act of 1875. This Act was an important milestone, and up to 1900 resulted in almost miraculous changes, including adequate provision for proper drainage and scavenging, removal of house refuse, provision of fever hospitals, and a satisfactory water supply. In 1900 Great Britain stood head and shoulders above all nations in the matter of public health services. Still greater progress was made in the first quarter of this century; maternity and child welfare centres were established, and tuberculosis services reduced the death rate from this disease by 50 per cent. But in spite of all these services we were not yet getting the best results. The working classes did not yet fully appreciate the services provided for their benefit. It was still essential to teach the people that what was good enough for their grandparents was not good enough to-day. It was precisely here that the Health and Cleanliness Council could do, and did, its best work. It came into existence primarily to assist the local authorities in this educative work. Dr. Fenton reminded his audience that the council was in close touch with 120 health authorities, seventy-seven education authorities, thirty-nine insurance committees, and thirty other similar organizations. He complimented Miss Norah March, the enthusiastic secretary; Dr. Buchan, the president; and Professor Kenwood. In reply Dr. Buchan referred to the lasting truth of the council's slogan—"Cleanliness is the first law of health." He would like to go much further, and advocate universal public baths, public wash-houses, and private baths. There had been a change, he said, in the habits of the people. They desired cleanliness; they desired the open-air life and more recreation. Even the housewife, most hard-working of women, was lifting up her voice to demand more leisure. Labour-saving devices, of which

electricity was the most important agent, were coming to her rescue. He himself hoped that we were approaching the time when all labour-saving domestic appliances would be available to all classes and all purses. Houses were now being built with this principle well to the fore. Already there were a greater number of houses where the housewife was considered in so far as they were easier to keep clean than the older type of house.

### West Riding Medical Salaries

The report of the Public Assistance Committee of the County Council of the West Riding of Yorkshire for the year ended March 31st, 1934, contains an important reference to the salaries of district medical officers transferred from the former boards of guardians. From the date of its appointment, it is stated, the committee recognized that the pre-transfer rates of salaries were in a large number of instances disproportionate to the duties and responsibilities, and were not founded upon any uniform basis. Careful consideration was given to the matter from time to time ; during the year under review recommendations were made to the county council with reference to dealing with such cases, and adjustments in salary and terms of remuneration were made. In addition, the Public Assistance Committee has varied the terms of appointment of district medical officers to provide that the supply of drugs and medicines shall no longer be the responsibility of the medical officers concerned out of the inclusive salaries paid to them for their professional services. An arrangement has been made under which these drugs and medicines prescribed by them for the outdoor poor shall be dispensed by a panel of chemists throughout the West Riding administrative area, and be paid for separately by the county council. Consideration has been similarly given to the question of holidays, since these were found to have lacked uniformity in the past, and a scale has been drawn up. Medical officers, hospital assistant matrons, ward sisters, and charge nurses are now to receive the equivalent of eighteen working days, while probationer nurses receive twelve. Accommodation in some institutions has been certified by the Board of Control, and eighty-six beds are reserved for mental defectives at three such, the West Riding Mental Deficiency Act Committee being responsible for these patients. Relief of a special character was granted in 717 cases, of which ninety-four were in respect of dentures and 150 of surgical appliances. Arrangements have been made for verification of the family circumstances, and for recovery of the expenses when reasonable. Restrictions upon public expenditure have continued to affect the progress which it had been hoped to attain in the development, modernization, and reconstruction of institutional accommodation, but a good deal has been done, nevertheless, by way of improvement and repair in cases of urgency.

### The Waking Hour in Hospital

On the question of patients' waking hours King Edward's Hospital Fund reports further progress by the London voluntary hospitals as the result of its recommendation that, unless there was some exceptional and adequate reason to the contrary, the most suitable hour for the waking of patients was 6 o'clock. This recommendation resulted from an inquiry held in 1931.[1] At that time the hour of waking was earlier than 6 o'clock at 53 per cent. of the London hospitals. By 1932 the number had fallen to 31 per cent., and it has now been further reduced to 21 per cent. Calculated as a percentage of the number of patients the results are still more satisfactory, only 15 per cent. of the total number being awakened at an earlier hour than 6 o'clock. All the hospitals which continue to have an earlier hour than 6 o'clock give some special reason for it ; and the visitors of the King's Fund will be asked to report on these reasons at the next annual inspection of these hospitals.

[1] *British Medical Journal*, June 6th, 1931, p. 992.

### Maudsley Hospital Courses

Lectures and practical courses of instruction for a diploma in psychological medicine will commence at the Maudsley Hospital on January 1st, 1935. Part I of the course will include twelve lectures on the physiology of the nervous system and four lectures and demonstrations on physiological psychology by Dr. F. Golla ; four lectures on biochemistry in relation to the nervous system by Dr. S. A. Mann ; eight lectures on the anatomy of the nervous system by Professor Le Gros Clark ; eight lectures on applied psychology by Dr. Henry Devine ; six lectures on mental mechanisms by Dr. E. Mapother ; eight lectures on contemporary schools of psychology by Professor F. A. P. Aveling, and two on the practical application of intelligence tests by Dr. F. C. Shrubsall. Part II of the course will open in March. The fee for the whole course, Parts I and II, is £15 15s. ; for Part I or II separately £10 10s. ; for single series of lectures in Part I £4 4s. or in Part II £2 2s. ; for single series of demonstrations £1 1s. Inquiries should be addressed to Dr. F. Golla, honorary director of the Medical School, Maudsley Hospital, Denmark Hill, S.E.5.

## Reports of Societies

### ANTE-NATAL CARE AND THE MATERNAL DEATH RATE

The Sections of Epidemiology and of Obstetrics and Gynaecology of the Royal Society of Medicine combined for a discussion, on November 23rd, on "The Results of Ante-natal Care: How they can be Improved." Dr. J. D. ROLLESTON presided, and such interest was taken in the discussion, about twenty speakers participating, that the meeting was prolonged beyond the customary two hours.

Dr. ISABELLA CAMERON, medical officer of the Ministry of Health, said that she had been one of the students of Dr. Ballantyne, the pioneer of ante-natal supervision, who approached it from a study of foetal pathology, but saw in it a neglected branch of midwifery. His teaching was an inspiration in early days to workers interested in infant welfare rather than to his fellow obstetricians, and consequently ante-natal work tended at one time to be a subsidiary activity of the organizations for infant care. The majority of expectant mothers had now some degree of ante-natal supervision, which was inadequately associated with attendance at confinement and during the lying-in period. Ante-natal care was too frequently regarded as an entity apart from the midwifery service. No single part of that service was in complete alignment with any other part, and too little recognition was given to the fact that, biologically, pregnancy, labour, and lying-in were consecutive phases of one process. Much ante-natal visiting lacked direction and precision, and many consultations were conducted in a perfunctory and half-hearted manner. Some of the officers were not only junior in status, but inexperienced in dealing with patients. Ante-natal work became to too great an extent an eager search for the abnormal, and opportunities for the support and encouragement of women passing through a normal pregnancy were lost.

#### IS THE MATERNAL DEATH RATE REALLY HIGH?

Mr. G. F. GIBBERD (Guy's Hospital) said that it was useless to regard ante-natal care as a separate part of midwifery. An improvement in the practice of ante-natal care would come about as a part of the improvement in the practice of midwifery as a whole. Maternal

mortality being as low as 0.5 per cent., it was difficult to lower it still further. It was relatively easy to reduce an accident incidence from 50 to 30 per cent., but quite another thing to reduce one of 0.5 per cent. to a still lower figure. Maternal mortality was already so low that its further reduction required such a standard of wisdom or skill on the part of doctor or midwife as in the present state of education could be expected only in very few. Lord Moynihan, in a speech on November 13th, was reported to have said: "Puerperal sepsis is in my judgement invariably preventable, and, if preventable, why not always prevented?" People who talked like that failed to realize, first, that perfection was unattainable, and, secondly, more important, that the nearer perfection was approached the more tedious the effort became. The problem of providing effective ante-natal and intra-natal care was so difficult that results were unlikely to be obtained by any process other than the gradual evolution of wisely and extensively trained men and women to support any scheme or organization that public authorities introduced. It was doing great disservice to the women of England to underestimate the difficulty of the problem.

### THE GENERAL PRACTITIONER'S POINT OF VIEW

Dr. T. J. HOLLINS (Hampstead) spoke from the point of view of the general practitioner. A little over twenty years ago a movement was started with the laudable object of reducing maternal mortality, and to-day it had assumed the spiritual fervour of a crusade; an elaborate and costly machinery set up by the Government was in active operation, and when the wheels began to revolve everybody thought it was the millennium. But in spite of high hopes a breakdown had to be confessed, and the cause was the methods of examination in use to-day. He distinguished between ante-natal care, comprising a general survey of the physical, social, and psychological condition of the patient, which was of great value, and ante-natal examination, which included abdominal examination and pelvimetry, of very limited and grossly exaggerated value. The examination under ante-natal care should include the general health and condition, with special reference to tonsils and teeth, periodic examination of urine, careful examination of the heart, investigation of any discharges present, any history of stillbirths, and, finally, estimation of blood pressure from time to time. All these were sound precautionary measures. Ante-natal examination, on the other hand, had in view the determination of the presentation of the size of the child, and of the sufficient roominess of the birth canal. He emphatically declared against the reliability of this examination, and gave instances in point. He likened the man who relied on the present methods of ante-natal examination to a motorist who dashed over cross-roads trusting to his hooter for safety. If the old methods were unscientific and uncertain, what of a substitute? He believed it possible in every case to tell with exact certainty the presentation, size of child, relative size of head and pelvis, and internal measurements of pelvis by the aid of *x* rays, and held that *x* rays should be used in all cases of primiparae and in those cases of multiparae in which there had been trouble in a previous confinement. He also stressed the need for continuity of attendance: the person who carried out the ante-natal examination should be present at the confinement.

### A WHOLE-TIME MATERNITY SERVICE

Professor F. J. BROWNE (University College Hospital) declared that the best ante-natal care was of little use unless supplemented by competent care during and after delivery. Ante-natal, intra-natal, and post-natal care should be carried out by the same person. Organization would not appreciably reduce maternal mortality, apart from improvement in the personnel of the service. Four maternity service schemes had recently been before the public: the British Medical Association scheme, the scheme of the Departmental Committee (founded upon the first), and the schemes of Professor Blair-Bell and Professor Munro Kerr. All four envisaged a service in which the case was delivered by the midwife, who called in a doctor if necessary, while the services of a specialist and of a hospital were available at call. But in this chain of services there was scarcely a strong link. The midwife's standard of training and admission to the roll was far too low; specialists were too few and often too distant; admission to hospital often meant treatment by a house-surgeon without supervision; while, as for the general practitioner, all the other links could be strengthened except this, and the general practitioner should be eliminated from the service altogether. He urged this on the grounds that it was impossible to train the undergraduate to become a competent obstetrician, the proper training for which demanded three years in a large maternity hospital under supervision; that any one general practice supplied too few maternity cases and too few abnormalities of any one kind to enable the practitioner to maintain competence; and that the general practitioner's frequent contacts with septic injuries made him apt to convey sepsis to his midwifery patients. Few practitioners would regret the loss of midwifery, for it entailed heavy responsibility without corresponding reward, and often interfered with other urgent work. The practice of medicine to-day, even without obstetrics, called for almost superhuman energy and experience. He had received a letter from a medical officer of health who stated that the ante-natal clinics in his area were at first run by general practitioners, but they proved to be so indifferent that a whole-time service had to be instituted, and the whole-time system was increasingly popular with the mothers. Professor Browne proceeded to sketch a whole-time maternity service, with a maternity unit in each county, staffed by whole-time medical officers, with highly trained midwives, and a director at the head. There would be a primary centre in the county town, with perhaps fifty beds, and attached to a general hospital. Associated with this would be a number of ante-natal clinics within a certain radius. Secondary centres in charge of deputy directors would be arranged elsewhere in the county. The cost of such a national scheme would be about two millions.

Mr. EARDLEY HOLLAND considered that maternal mortality was as low as it was ever likely to be with the present standard of obstetric practice and teaching. If, as they all desired, it was to be further reduced an entirely new standard must be set up. He agreed with Mr. Gibberd that the maternal mortality rate was not remarkably high when the difficulties and dangers of midwifery were considered, along with the comparatively poor physique of the urban woman. The new obstetric tradition was only to be obtained by facilities for post-graduate training such as did already exist in some centres.

Dr. A. J. WRIGLEY spoke as a medical officer at a municipal ante-natal clinic, where, he said, he felt himself divorced from any doctor in practice in the borough, and very nearly divorced from his colleagues in the public health service. He agreed with Mr. Gibberd that maternal mortality was not going to be lowered very quickly; nevertheless, there were districts where a marked lowering had taken place. He crossed swords with Dr. Hollins over the value of *x* rays in ante-natal examinations. Radiology was of little help, and the radiologist himself admitted it.

### THE GENERAL PRACTITIONER DEFENDED

Dr. W. H. F. OXLEY spoke as a general practitioner who had for many years carried out ante-natal, intra-natal, and post-natal work. He was absolutely convinced that there was a great deal of good in ante-natal care, but ante-natal care represented perhaps only 5 per cent. of midwifery practice as a whole. Midwifery had receded from the general practitioner. Thirty years ago, in advertisements of practices in the *British Medical Journal*, it was made a selling point that there were "250 midwifery cases a year"; but now it was the other way about—the bait was "no midwifery." Nevertheless, where a general practitioner took an interest in the subject and had working in close touch with him a controlled body of midwives and a general hospital, he could get results second to none. As for Professor Browne's scheme, it looked nice on paper, but was quite impracticable.

Dr. LETITIA FAIRFIELD said that ante-natal work had been "over-boosted," and there was now a reaction.

The maternal mortality rate, as Mr. Gibberd had said, was really low, and its further reduction was influenced by the law of diminishing returns. Two critical factors in midwifery were the technique in the conduct of the normal case and the employment of a consultant who would be on the spot and watch an abnormal case throughout. Professor Browne's scheme was interesting, but she thought it likely to be so expensive that no rate-payer in the country would be able to afford to have a baby.

Dame LOUISE MCILROY said that failure in ante-natal work was due to want of continuity in observation. One of the openers in the discussion had spent his time pointing out the errors of the specialist, which was very easy. That was the bane of the position: that those concerned all became critics of one another. She agreed that the general practitioner knew more about the patient herself than anybody else, and if he could be attracted into the service he would be the one who should undertake the work. She suggested a panel of general practitioners, all of whom would have had post-graduate training in maternity hospitals. Undergraduate teaching in this subject was still open to a good deal of criticism.

### ANTE-NATAL CLINICS AT FAULT

Dr. G. W. THEOBALD said that just as it was a tragedy that anaesthesia should have been discovered thirty years before antisepsis, the result being to inflict suffering on thousands of people who would not otherwise have suffered, so it was unfortunate that just when the public conscience was becoming aroused over maternal mortality the cult of the ante-natal clinic should develop. If every ante-natal clinic in this country were swept away the mortality would not be increased; it might be lowered. On analysing the causes of deaths of mothers, a certain number were found to have died from diseases associated with pregnancy; these would not be affected much by ante-natal care, though ante-natal beds might be a different story. As for the toxaemias of pregnancy, there was not the slightest evidence that ante-natal care could affect the death rate. Ante-natal care was not a substitute for good midwifery, and it made an enormous amount of meddlesome midwifery possible. He was convinced that maternal mortality could be reduced by half within the next ten years, and with less expenditure on the maternity service, if there were established about sixty hospitals on the Rotunda principle, each working a certain radius by means of midwives and general practitioners, and all abnormal cases being sent into hospital. As for Dr. Oxley, he declared himself a general practitioner, but he was in reality an obstetric specialist, and the speaker would rather see the hospitals he had suggested staffed with practitioners of Dr. Oxley's type than "with F.R.C.S.'s galore with no experience."

Dr. F. N. REYNOLDS suggested that if Government departments had analyses showing in what branch of the service—midwives, hospitals, general practitioners, specialists—the major mortality occurred, these should be placed before the Section of Obstetrics for discussion so that respective responsibility could be assessed. Mr. L. C. RIVETT declared obstetrics to be a whole-time job, demanding much patience and very irregular hours. A whole-time service was the only solution of the difficulty, and the same obstetrician who conducted the confinement should supervise ante-natal and post-natal care. Dr. W. M. FELDMAN agreed that *x*-ray examinations were of enormous value. He also agreed with the statement that deaths from septic poisoning were not entirely due to exogenous introduction of toxin, but possibly to endogenous toxic states.

### NO GROUND FOR PESSIMISM

Professor JAMES YOUNG was disappointed at the pessimism of the discussion. They were all apt to be discouraged at the slow response to the energy expended on this problem, but the Maternal Mortality Committee laid down some very simple propositions, and he was convinced that if they were put into operation alleviation would come about. It had to be borne in mind that the maternal death rate was a compound of very varying figures. In some districts it was 2 per 1,000; in some it went up to 10 or 12. Surely in the present state of knowledge 12 should be regarded as an excessive figure, which it should be practicable greatly to reduce. One town in the North of England, by simple measures, had brought down its average from nearly 9 per 1,000 to 1.7.

Mr. ALECK BOURNE referred to the great importance of teaching the technique of normal labour. Patients were lost from errors in handling midwifery and the too early use of forceps. The ante-natal officer was inclined to be too much haunted with the fear of disproportion. If ante-natal work were done by people more experienced in normal labour there would be less interventions and more spontaneous labours, and therefore a lower death rate. Lady BARRETT considered the two most urgent matters to be the education of the medical student and greater access by the general practitioner to practical work and experience by way of refresher courses. Dr. DICK REID said that one of the greatest dangers of obstetrics was the academic mind, and one of the greatest sources of help to proper ante-natal care of women would be the naturalist mind applying the philosophy of development to the study of the natural functions of woman. Sir WELDON DALRYMPLE-CHAMPNEYS mentioned that once it was his duty to organize a reply to a questionary from the British Medical Association on the general subject, and at the meeting at which the nature of the reply was debated one general practitioner got up and stated that he always applied forceps unless there was a strong contraindication. Dr. MARY KEENE urged the desirability of the universal provision of milk for pregnant women and nursing mothers.

All the openers briefly replied. Professor BROWNE said that his scheme had received exactly as much support as he had expected, which was none at all. Dr. Oxley had declared it to be impracticable; he would be only too delighted to offer Dr. Oxley the first directorship in his county unit. Dr. Fairfield had said the scheme was too costly. But it would cost only two millions, and the British Medical Association scheme would cost two millions and a quarter. Cheap midwifery would not give the results.

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## BRITISH ORTHOPAEDIC ASSOCIATION

The annual meeting of the British Orthopaedic Association was held in London on November 2nd and 3rd. Clinical programmes were arranged at St. Bartholomew's Hospital by Mr. R. C. ELMSLIE and his colleagues, and at the Lambeth Hospital by Mr. G. F. STEBBING. The Robert Jones gold medals were presented to Mr. R. W. BUTLER and Mr. H. J. SEDDON, whose essays on the subject of Pott's paraplegia were read in opening the first discussion.

### Pott's Paraplegia

Mr. R. W. BUTLER said that in tuberculous disease of the spine three clinical types of paraplegia should be differentiated. The first type, "early onset of temporary paraplegia," was due to toxic and vascular reactions in the cord from the activity of tuberculous disease, and sometimes to compression of the cord by caseous granulation tissue. In the second type, "early onset of permanent paraplegia," the paralysis persisted after recovery of the tuberculous disease owing to avascular atrophy of the cord; it was attributable to prolonged compression of the cord by abscesses, to acute thrombosis of the vessels supplying the cord, to bony compression by pathological dislocation of the spine, or to compression by the displacement of sequestra. In the third type, "late onset of paraplegia," the paralysis might appear many years after apparent quiescence of the disease, and this type included 50 per cent. of the whole series of 193 cases. Late paraplegia was due to atrophy of a previously damaged cord as a result of prolonged or of fresh infection; bony compression was a rare cause, and there was no evidence that chronic tuberculous meningitis was responsible for paraplegia at any stage.

Mr. H. J. SEDDON said that for every four cases of early onset of paraplegia which recovered there was one which failed to recover. Failure was due either to persistence

of cord compression for too long a period or to the sudden complications of vascular thrombosis or bony compression by dislocation. Treatment, therefore, was primarily conservative, and included immobilization and hyperextension. If some voluntary power remained the prognosis was excellent, but if there was complete loss of voluntary power recovery was improbable unless pressure was relieved during the first six months. If there was not spontaneous recovery within six months of onset costotransversectomy and evacuation of the abscess was indicated. When the onset of paraplegia was sudden, and paralysis was complete within a few days, bony compression should be suspected, and relieved by hyperextension of the spine. Laminectomy was only indicated in cases exhibiting the spinal tumour syndrome (the neurological signs preceding the orthopaedic sign), or in cases of posterior spinal disease. Cases of late onset of paraplegia should be treated conservatively, but in severe cases the removal of tuberculous material or of bony ridges, and combined laminectomy and spinal grafting, should be considered. If there was complete motor paralysis for more than six months there was no likelihood of recovery. The subject was covered so fully by the very admirable opening papers that the time available for further discussion was strictly limited. Mr. G. R. Girdlestone (Oxford) pleaded for the relief of pressure by costotransversectomy at an even earlier stage, and Mr. McCrae Aitken said that the pressure could be effectively relieved, without actually removing bone, by dissecting between two transverse processes.

### Transport of Cases with Back Injuries

Mr. T. P. McMurray (Liverpool) said that in fractures of the spine the advantage of face-down transportation was that the postural movement necessary to reduce the fracture was instituted at once, so that the risk of injury to the spinal cord was minimized. The disadvantages were such that patients suffered from shock and that lying on the face might embarrass respiration; there might be fractures of several ribs with danger of visceral injury. The speaker did not advocate any change in the existing teaching; first-aid workers could not be expected to diagnose fractures of the spine, and the act of turning patients over was dangerous.

Mr. McMurray's recommendation was supported by Mr. P. B. Roth. It was opposed by Mr. Watson Jones, Mr. McKenzie Crooks, Professor Houghton, Mr. Clarke, Mr. Davidson, and Mr. Hope Carlton.

Mr. R. Watson Jones (Liverpool) said that St. John Ambulance men were already taught to turn these patients over, but they were instructed to turn them on to their backs and to lift them by a method which inevitably produced hyperflexion. If a patient with a fracture-dislocation was carried in this manner severance of the cord was inevitable. The association of rib and spinal fractures was so rare as to be negligible, and in any event the ribs were no more likely to be fractured in front than behind. Professor Houghton (Dublin) said that the diagnosis should not give rise to difficulty. If, after a severe injury, a conscious patient complained of pain in the back and inability to move one or both legs he should be lifted and carried face downwards. Mr. McKenzie Crooks (Nottingham) reported a series of fifty cases of spinal injury; there was only one case with injuries to the ribs, and that patient was more comfortable on the face than on the back. Mr. H. O. Clarke (Manchester) said there could be no doubt that ordinary face-up lifting was capable of producing paraplegia which did not previously exist. The speaker had personally witnessed a throw from a horse which caused fracture of the spine without paraplegia; the patient was turned and lifted by ambulance men and was paraplegic by the time hospital was reached. Death resulted from bladder infection.

### Congenital Club-foot

Miss Forrester-Brown (Bath) advocated repeated manipulation, splints, and plaster as the routine treatment for congenital club-foot, but said that many cases relapsed despite every care and attention. Open division of the tight structures on the inner side and at the back of the heel was often necessary, and in old cases an astragalectomy was sometimes performed. A rotation osteotomy of the tibia was a valuable procedure for persistent in-toeing.

Mr. B. L. McFarland (Liverpool) said that open operations on the inner side of the foot were followed by scar tissue contracture, and sometimes the deformity relapsed. Tenotomy of the tendo Achillis was rarely indicated, and was a dangerous procedure. Mr. C. Lambrinudi advocated early tenotomy of the tibialis anticus and posticus, but these procedures were condemned by Mr. Naughton Dunn (Birmingham), who said that division of the anterior tibial tendon caused claw-foot, and division of the posterior tibial tendon caused flat-foot. Mr. E. P. Brockman considered astragalectomy to be a very bad operation, and said that all cases so treated relapsed sooner or later. The speaker recommended open division of the tight structures on the inner side of the foot.

### Fractures of the Neck of the Femur and Intra-articular Arthrodesis of the Hip

Mr. Watson Jones said that after high fracture of the neck of the femur there was often radiographic evidence of impairment of blood supply in the proximal fragment, and this accounted for the slow union of these fractures. Nevertheless, the neck distal to the fracture had a normal blood supply, and its decalcification and absorption was due to the traumatic hyperaemia of continued movement of the fragments on each other; it was not observed when the fracture was perfectly immobilized. The prolonged and complete immobilization necessary could be secured by the Smith-Petersen nail, but the operation was most difficult. The speaker had devised a canalized nail and guide to facilitate accurate central insertion by open operation. A similar principle had been independently used by West in Australia and Sven Johansen in Sweden, but these workers had developed a subcutaneous technique with Kirschner wire and radiographic control which was more difficult and less certain. The treatment was relatively safe even in very old people, because no splints or plaster were used; no weight-bearing was permitted until the fracture was united. The operation was contra-indicated in old fractures with avascularity of the head of the femur. Non-union after arthrodesis of the osteo-arthritic hip was analogous to non-union after fracture of the neck of the femur and could be prevented in the same way by driving a Smith-Petersen nail into the pelvis. With this addition to the technique of simple intra-articular arthrodesis consolidation was certain and rapid.

Mr. E. W. Hey Groves (Bristol) had seen the Sven Johansen technique on the Continent; two or three hours of tedious work had been involved, and the speaker believed that the open operation which had been described would prove more satisfactory. Mr. Naughton Dunn (Birmingham) said that the operation was one of great difficulty, even in the hands of Smith-Petersen himself, but the high percentage of successful results reported commended the method. Mr. V. H. Ellis advocated earlier weight-bearing in a walking calliper splint, but the opener replied that the Thomas splint or calliper was dangerous in such high fractures, and was not to be recommended at any stage of treatment; the splint extended up to but not beyond the fracture, and directly transmitted every movement of the limb to the level of injury.

### Movement of the Lumbar Spine and Pregnancy

Mr. Lambrinudi reported clinical observations which disproved current obstetrical teaching that lumbar lordosis was normal in pregnancy. Normally there was extension of the lumbar spine and flattening of the sacrum, but this movement was only possible if the muscular tone was good and the sacro-iliac and lumbo-sacral joints were mobile. Failure in this mechanism, with the development of an abnormal lumbar lordosis, accounted for backache during and after pregnancy. Mr. N. Capener showed comparative series of radiographs of the lumbar spine with patients lying, standing, and stooping. The intervertebral foramina were enlarged in flexion of the spine and narrowed in hyperextension. The bearing of this observation on sciatic scoliosis was discussed.

### Adolescent Coxa Vara

Mr. V. H. ELLIS reported nine cases of slipped upper femoral epiphysis, and advocated gradual correction of the deformity by skeletal traction in a Thomas splint. Forcible correction by manipulation under anaesthesia usually caused degeneration of the epiphysis and osteo-arthritis of the hip. Mr. E. N. WARDLE (Liverpool) advocated traction in the neutral or even the adducted position by means of a Thomas frame, with the groin strap on the affected side.

## OPERATION MASKS

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Academy of Medicine in Ireland, held on November 9th, with Dr. BETHEL SOLOMONS in the chair, Professor R. E. TOTTENHAM showed operation masks, designed by himself, which he considered more efficacious in a tropical climate than the masks used at home. They were smaller and made of lighter material, so the operator, when wearing them, did not get too hot.

Dr. SOLOMONS said that the small celluloid mouth mask seemed to be a practical proposition. For some time he had been using, in gynaecological surgery, a mask with a piece of cellophane between the layers of gauze. It had been proved to be unnecessary to cover the nose unless the operator had a cold. It would be worth while conducting the experiment of talking over agar plates with the celluloid mask on to ascertain if it were effective.

Dr. J. F. CUNNINGHAM thought that the operation masks shown by Professor Tottenham were a great improvement on those in current use. He referred to a Viennese mask, which he had recently seen, and which fitted a little bit lower on the face than those shown by Professor Tottenham, and did not obstruct vision at all. A mask which did not come over the nose must be very much cooler than one which did. In America they had made several efforts to invent a perforated mask constructed from an impervious material.

### Cervical Myoma

Dr. D. J. CANNON showed specimens from a patient with associated cervical and broad ligament fibroids.

Dr. SOLOMONS said that while he did not agree that the treatment of cervical myoma could be absolutely standardized certain rules could be laid down: (1) In most cases the ureter should be defined in its pelvic course. (2) While myomectomy was often possible, in case of any doubt about haemostasis hysterectomy should be done. He suggested that the technique of finding the settling time of the blood was so simple that it should be done in all cases of possible infection. Broad ligament myoma was not the correct term to apply to the cervical tumour.

Dr. CUNNINGHAM said that these types of fibroids were rather uncommon, and generally gave rise to a great deal of difficulty in removal. When he removed them he always preferred to carry out extracapsular removal. He thought that if this was done it was easier to control the haemorrhage. The most troublesome bleeding occurred from veins. He mentioned a case in which he had removed a fibroid and got a certain amount of haemorrhage from the side of the uterus. He tied the vessels on that side, and the patient did very well; eighteen months later she was delivered of a healthy baby. The main difficulty in these cases was to control the blood supply, and, if it was possible to get to the base of the uterus, it was not very difficult to do this. He was of opinion that it was always easier to control the haemorrhage from these tumours if they were taken out of their capsules. He thought it was practically impossible to standardize treatment in such cases.

Dr. F. S. BOURKE asked if the specimens were really broad ligament fibroids. He thought that they were not; he regarded them as uterine myomata which had grown into the broad ligament. Cervical fibroids were often adenomyomatous, and not just ordinary fibroids such as were found in the uterus.

# CORRESPONDENCE

### Elections to G.M.C.

SIR,—I should be much obliged if you will allow me through your columns to thank those registered medical practitioners of England and Wales who, in the recent election to the General Medical Council, expressed by their votes a renewal of their confidence in me as their Direct Representative.—I am, etc.,

London, N.W.11, Nov. 26th. HENRY B. BRACKENBURY.

### Radiological Practice

SIR,—The time has surely come when steps should be taken to prevent the use of *x*-ray apparatus by those whose capabilities are inadequate. The present legal position is that anyone may purchase and use equipment which is, as is well known, a potential source of danger both to patient and to operator. Thus it is possible for any individual to employ *x* rays for diagnostic and therapeutic purposes without having the necessary anatomical, pathological, and medical knowledge. Can it be right that a radiographer (however skilled he may be as a technical worker), a chemist, or an engineer should be legally empowered to express an opinion as to the evidence of a pathological process or to expose a patient to a beam of *x* rays for purpose of treatment. It is, of course, recognized that members of the Society of Radiographers undertake that they will not interpret radiographs, and that they will not carry out radiation therapy except under the strict supervision of a qualified medical practitioner; but there are many quasi-radiographers who are not members of this society, and who, therefore, are *not* bound by such an undertaking.

Radiographic interpretation and the determination of *x*-ray dosage call for very skilled judgement, but it is suggested that such is not among the attributes of many who succumb to incautiously phrased advertisements, which infer that efficient radiological practice requires nothing more than the acquisition and operation of a piece of apparatus.

The remedy appears to lie in the hands of the general members of the medical profession. The assistance afforded to them by radiology may be immense, but only when they will recognize that the whole subject is one requiring endless study, subsequent to a thorough training in general medicine, with especial reference to pathology and physics.—We are, etc.,

G. SHEARER,
President, British Institute of Radiology.

J. DUNCAN WHITE,
Chairman, Medical Committee, British Institute of Radiology.

32, Welbeck Street, W.1, Nov. 22nd.

### Short-wave Diathermy

SIR,—May I sound a note of warning with regard to the so-called short-wave diathermy therapy—ultra-high-frequency—or by whatever other name this treatment is called.

The time is not yet ripe to discuss in a general medical journal the differences between treatment by this method and treatment by ordinary diathermy. Also clinical experience is still limited, and opinions must necessarily be tentative. The point, however, that I do wish to make is that in this newish technique we have a treatment capable of sometimes altering a patient's symptoms rapidly, even occasionally dramatically, and therefore

it is to be regretted that there is a tendency to write it up as a new panacea. It is nothing of the kind.

The dangers in this position are threefold: first, that it may go through a false boom like ultra-violet light; secondly (again like light) serious harm may be done to a few; and thirdly, the genuine group of cases for which it would be the treatment of choice will be lost sight of. The discussion at the Royal Society of Medicine on November 16th on this subject, opened by Dr. Turrell, was interesting in disclosing widely divergent views. The only way in which sound clinical judgement can be formed is by the gradual accumulation of a mass of clinical results, both in hospital and in private practice, by medical practitioners familar with the scope and reaction of its better-known cousin—diathermy. Do not let us ruin a new, and possibly valuable, therapeutic measure by exaggerated claims.—I am, etc.,

London, W.1, Nov. 26th. C. B. HEALD.

## Influence of Heat and Light on the Nasal Mucosa

SIR,—In regard to the annotation on this subject in the *Journal* of November 24th (p. 951) I would point out that Winslow, Greenburg, and Herrington, just as Dufton and Bedford, did not carry out my experimental method, but one so arranged that it could not yield the results obtained by me. They left one nostril open for breathing, while connecting the other by a well-fitting tube to a recording instrument.

Now if a glass tube, one inch long, be chosen large enough to fit comfortably the open nostril, the lower opening of this tube can be greatly narrowed (even till its area is only one-sixth of that of the upper opening) without significantly affecting the quiet breathing of a resting subject. This method is, then, much too insensitive.

The spirometer method used by Winslow and his coworkers was arranged so that results due to nasal congestion produced by the source of heat were recorded. But no precaution was taken to see if this source was of such a strength that the "nose-opening" rays had a chance of showing their effect. There is, as I have pointed out, a balance between the actions of the rays, and this must be found by experiment. My critics do not appear to have paid any attention to this important point. "Nose-opening" rays can easily be shown by the following method.

An electric heating coil, about 4 by 1½ inches, is set up in a stand, and beside it is placed a small solid tungsten rod arc. The coil, heated to a dull red, gives off about fourteen times more energy than the arc. The subject sits about two feet from, and facing, these two sources, which are, at the start, screened from him. A screw nose-clip (obtainable from Messrs. Siebe Gorman, Ltd.) is adjusted to the subject's nose, and tightened until the respiration becomes slightly difficult; the right adjustment of the nose-clip is most important. A corrugated rubber tube (such as is used for breathing apparatus) is fastened round the body of the subject; one end of this is closed, and the other connected to a recording tambour, which is set to write on a slow-moving drum.

The subject keeps the eyes shut, or is blindfolded. A record of breathing is now obtained; then the screen is removed, and the two sources allowed to irradiate the subject's face. The breathing continues unchanged. The arc is next screened; the breathing in most subjects then becomes laboured, or quick and shallow; in many the mouth has to be opened, as nasal breathing becomes ineffectual. On unscreening the arc the breathing returns to what it was before. For subjects who have a considerable constriction of the nasal airway the use of the nose-clip may not be necessary.

My critics have tested one or two such subjects, but they apparently paid no attention to the need of using a source of heat of such strength that the "nose-opening" rays from the bright source had a chance of exerting their effect.

When the method described above is carried out some subjects will be found insensitive to the action of "nose-closing," and therefore of "nose-opening" rays. In the case of most of the sensitive subjects a glass screen converts the sun, or an arc, used alone, into a nose-closing source.

I have taken records from many members of the staff and patients of the St. John Clinic and Institute of Physical Medicine; some of these will shortly be published.—I am, etc.,

London, S.W., Nov. 25th. LEONARD HILL.

## X-Ray Examination of Empyema Cavities

SIR,—Observation of over one hundred cases of chronic empyema at the Brompton Hospital during the past two years suggests to me that the views expressed in Dr. A. Duff's letter in the *Journal* of November 17th (p. 921) are most dangerous.

The only reliable indication for discontinuing drainage of an empyema cavity is that there should be no longer a cavity to drain. The evil results of removing the tube before the cavity is obliterated are often not immediately apparent. The sinus usually heals, and the surgeon congratulates himself on an "impressively quick cure." I do not deny that in many cases he may be right. But the most careful clinical and radiological examination will not inform him of the probable future behaviour of an unobliterated pleural pocket. If this is left, it fills with discharge and its walls thicken and temporarily protect the patient from toxic absorption. Then, months or years later, this pocket may burst either externally or into a bronchus. Such recrudescence has been seen here as long as fourteen years after the original empyema. If it points externally a chronic persistent or recurrent discharging sinus results. If a pleuro-bronchial fistula forms, the resulting syndrome resembles that of fetid bronchiectasis, and we occasionally have such cases sent here with this diagnosis. The chronic empyema cavity, the obliteration of which is necessary for cure, is by this time lined with grossly thickened and leathery pleura. I need not stress the great difficulty of dealing with such a condition: a series of severe and extensive operations is often required, involving disability for many months.

By maintaining adequate and proper drainage of acute empyemata until it is clearly established, if necessary by *x*-ray examination after introduction of lipiodol, that the cavity is obliterated, the incidence of chronic empyemata after uncomplicated acute empyemata can be reduced to zero.—I am, etc.,

J. G. SCADDING, M.D., M.R.C.P.,
Resident Medical Officer,
London, S.W.3, Nov. 19th. Brompton Hospital.

## Plea for Abolition of the Pelvimeter

SIR,—In his letter on this subject Mr. Aleck Bourne is, presumably, being deliberately provocative, and has for that reason not hesitated to strain his argument. Experiences differ, and it is certainly not my experience that Caesarean sections or inductions of premature labour are performed on the basis of external pelvimetry *alone*. Mr. Bourne will not deny that if the external measurements (even allowing for the possible inaccuracies of which he makes the very most) are definitely below normal they suggest that the true pelvis is also smaller than normal;

and that if the average difference between the interspinous and intercristal diameters is markedly altered it suggests that the shape of the true pelvis is also altered. Such suggestions of abnormality in regard to the true pelvis are surely all that is derived from external pelvimetry by anyone with any knowledge of midwifery. If that is so, then, I submit, their value is considerable, because they determine a particularly careful estimation of the size and shape of the true pelvis, as well as of the relative size of the pelvic brim and the head.

Performed by an experienced obstetrician, digital examination of the pelvis, as preferred by Mr. Bourne, may be most helpful; but when he relies upon the "knuckle test" of the inter-tuberischial diameter he seems to me to fall into the very error he condemns. To "measure" by an instrument of variable size—that is to say, by a variable standard of measurement—cannot be put forward as an accurate method.

Mr. Bourne's questions are as difficult to answer as the much-discussed "peace questionnaire." The only one to which I could give an unqualified "Yes" is the last, and it is not really germane to Mr. Bourne's main point.

As another of your correspondents states, we seem to be on the verge of another "drive" in connexion with maternal mortality and morbidity. The last one induced a condition bordering on national hysteria and panic, and led to hasty administrative measures whose results have been disappointing. In the opinion of many this misfortune was the result of following extreme opinions. Mr. Bourne's advice seems to me to be an "extreme" measure of over-correction of a fault that is less common in my experience than in his. I put it to him that what he really wants is not that we should discard our pelvimeters, but merely that we should not exaggerate the significance to be placed on external pelvimetry. In that view I am sure that he will have the support of all obstetric teachers.—I am, etc.,

Edinburgh, Nov. 26th. R. W. JOHNSTONE.

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SIR,—Mr. Aleck Bourne's letter pleading for the abolition of the pelvimeter, in view of the increasing death rate, in spite of our ante-natal methods, is deserving of support. Both external and internal pelvimetry are unreliable and harmful; accurate measurements cannot be made, and the patient is subjected unnecessarily to injury and sepsis. The same objection can be made to internal pelvic examination with the finger; besides, the employment of this method in a young woman necessitates an anaesthetic if discomfort or actual pain to the patient is to be avoided.

The most accurate method, as I pointed out in 1923 (Portsmouth meeting), of diagnosing the capacity of the pelvis and measuring the size of the inlet and outlet is by the *x* rays. Roentgenographic pelvimetry, besides demonstrating pelvic deformities, the effect of old fractures, or diseased joints, makes it possible not only to see the existence and extent of the pelvic contraction, both at the inlet and outlet, but also to compare the abnormal with the normal pelvis and measure the degree of contraction.

Every woman should have her pelvis measured by the *x* ray to see if she is fitted for child-bearing, and towards the end of her pregnancy, according to the degree of her contraction, if any abnormality is noted, another photograph should be taken to ascertain the presentation of the child and its size relative to that of the pelvis, thereby giving a definite diagnosis, and enabling the case to be treated by a suitable method.

If every woman on her first visit to the ante-natal clinic had her pelvis *x*-rayed it could be compared and measured with the "standard" photograph, and once and for all that woman would have a certificate of her pelvic capacity, which she could keep for future reference. No matter to what part of the world or to what doctor she went, she could, if the necessity arose, give accurate measurements of her pelvis, and save unnecessary examination, with its accompanying risks to sepsis.—I am, etc.,

Belfast, Nov. 26th. W. R. MACKENZIE.

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SIR,—I venture to express my delight at seeing Mr. Aleck Bourne's reference, in the *British Medical Journal* of November 24th (p. 963), to the uselessness of external pelvimetry. By openly stating his belief Mr. Bourne has had the courage to express an obstetrical reality of considerable importance. Unfortunately he proceeds to state an unreality when he mentions the frequency with which induction of labour is followed by inertia. The subject is one to which I have devoted considerable time and attention with very ample material.

Uterine inertia (a very real clinical entity) has never yet harmed an infant, nor has it ever been responsible for maternal damage or morbidity if correctly treated. Surely the condition to which Mr. Bourne refers is in reality incoordinate uterine action, spastic in character, and capable of passing into a condition of uterine "panic" if oxytocics are given or instrumentation applied.

If Mr. Bourne doubts me, let him ask the sister in charge of his wards the next time one of these cases to which he refers comes under his care. I venture to prophesy that in answer to his query as to whether Mrs. X is having any pains, he will get the reply, "Not real pains, Mr. Bourne." This answer is the sister's only means of conveying the reality of incoordinate uterine action, in the present state of textbook teaching.—I am, etc.,

WENTWORTH TAYLOR.

Dudley Road Hospital, Birmingham,
Nov. 24th.

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## Anaesthesia in Maternity Cases

SIR,—This subject has so constantly been written about that I think the experience of an old country practitioner may be of use.

During over forty years' general practice I, in the later periods, almost invariably administered an anaesthetic. Sometimes the patient would use the apparatus herself, but more frequently the nurse, or it would be given by myself. The apparatus I used was one made by Krohne and Sesemann of London. It consists of a graduated bottle, to be hung from the practitioner's or nurse's clothes, and two tubes, one conveying the chloroform to the mask, and the other terminating in a rubber pump. The bottle was filled to the two-drachm mark and the first inhalations were given very weak. I often utilized this by giving the patient the pump to use herself; when she became more or less unconscious the flow of the anaesthetic naturally failed. The secret of success consists in the very small amount given at first, and, indeed, the design of this apparatus is to prevent the possibility of administering much at a time: I have kept a lady under the anaesthetic for four hours, giving great relief from pain for most of the period, and at the end pumping a little faster, and so entirely relieving all pain. In one case the husband, who desired to be present, gave the anaesthetic himself all the time (four hours).

I have used this apparatus in many operations. In one I remember a Doubting Thomas saw the bottle filled to the two-drachm mark, and when the femoral hernia operation was completed he again examined the reservoir, and found I had only used 30 minims of chloroform, while the patient neither moved nor experienced any pain during the operation. In alcoholic subjects it is notorious that larger

quantities of the drug must be used, but in all cases I began with the treatment I have stated ; it is safe and satisfactory.

The danger in administering chloroform is in giving strong doses at first. One should begin with two or three minims in the first minute, *very gradually* increasing each minute. There should be no choking or coughing nor any distress whatever, and a couple of drachms of the drug would relieve over a considerable period if given intermittently—a few whiffs when the pain shows evidence of coming on, and perhaps a remission during the interval. Given in this way the patient can converse and yet receive great relief from pain.

I would like to add, in view of the apparent increase in the number of fatal confinements, that in a matter of 2,000 cases I had but two deaths. Neither of them had I attended at the birth ; one I was called to about half an hour before she died. There was no uterine trouble to account for it, but I learnt that she had had hardly any sleep for a fortnight previous to delivery and during the day was doing cheese-making and caring for a number of children ; she simply died of exhaustion. The other death was due to an embolism carried to the heart during an attack of white leg, when the patient sat up in bed contrary to orders.

For years I used copiously a thymol ointment, and very seldom found any feverish conditions following the birth ; I consider thymol one of the most valuable antiseptics.—I am, etc.,

Peacehaven, Nov. 19th. ARTHUR CAMPBELL.

## Dilating the Cervix in Placenta Praevia

SIR,—Whatever Dr. Bethel Solomons writes is of course worthy of the utmost respect. All the same, I venture to think myself not quite so "horrifyingly" heterodox as might appear. I do regard over a score of cases as constituting a considerable experience, especially so since all save two of them were dealt with single-handed, and all in country cottage homes.

From the sixteenth century onwards dilatation and version were taught by Paré, Guillemeau, Mauriceau, Smellie, and others. Smellie says: "In all these cases let the parts be dilated slowly, and by intervals, to prevent laceration." On this Robert Lee says (1842), "These are the most clear, concise, and accurate rules which have been laid down by any author." Herman says (1897 ed., p. 311): "Dilatation of the cervix has formed a part of almost every plan of treatment that has been proposed. It is usually necessary, because dilatation of the cervix must precede delivery." And Comyns Berkeley (1925 ed., p. 502): "In all cases in which the os is half or more dilated, it will be quite easy to dilate it further so as to allow the performance of internal version." I sin in excellent company. There were brave men before Agamemnon, and I like the old dictum that fingers were made before forks—to wit, dilating bags.—I am, etc.,

Harston, Cambridge, Nov. 24th. W. J. YOUNG.

## Spontaneous Regression of Cancer

SIR,—Unlike Cervantes's hero, our modern Don Quixotes no doubt have an eye to news value when tilting at windmills. Your editorial comment on Dr. A. T. Todd's letter makes it so clear that he has deliberately chosen to misinterpret my remarks that he is not entitled to any reply from me. In case, however, there should be any shadow of doubt as to the calculated nature of his preposterous attack, I will quote from my letter to him dated November 9th, 1933 (a copy of which I enclose):

"I think you misunderstood what I said in reference to the spontaneous cure of cancer. My words were: 'It is only fair to state, too, that there are records—some highly circumstantial—of nearly 400 cases of complete spontaneous cure of cancer.'

"My implication was, therefore, that if there are so many cases which are claimed as being spontaneous cures it suggests that in such cases a long period may elapse during which the patient appears to be cured. I do not believe for one moment that they are in fact cured, and I suggested elsewhere:[1] 'So far as I am concerned I have never known a single case of idiopathic regression or apparent arrest of tumour growth in which eventual recurrence did not manifest itself.'

"My whole attitude, however, is that one must be extremely cautious in respect to the view that any particular method of treating cancer is efficacious unless one bears in mind the natural variations in the course of the disease and waits a great many years before arriving at definite conclusions."

If Dr. Todd wishes to be taken seriously he will cease to imply that even 400 *fully authenticated* cases of spontaneous cure can affect materially the gravity of the cancer problem. Bashford calculated that spontaneous regression occurs in one case among 100,000. Does such a percentage destroy the necessity for cancer hospitals or cancer research, as Dr. Todd with flippant hyperbole suggests?

It should also be known to Dr. Todd that, largely at my instigation, his methods of treating malignant disease are to be given an exhaustive and thorough trial at the Cancer Hospital. This scarcely argues the prejudice which his egregious letter would imply.—I am, etc.,

London, W.1, Nov. 26th. CECIL A. JOLL.

## Female "Bleeders"

SIR,—I was interested in the reports and comments on female bleeders, by M. A. Foulis and J. W. Crawford (*British Medical Journal*, September 29th, 1934), W. N. Leak (ibid., October 13th), and Robert Platt, Hugh G. Garland, and L. Ivan M. Castleden (ibid., October 20th). Before one may accept the reported instances of female "bleeders" as examples of true hereditary haemophilia, other haemorrhagic dyscrasias must be considered in the differential diagnosis (H. I. Goldstein, *Medical Review of Reviews*, New York, 1934, xl, 471 ; *Archives of Dermatology and Syphilology*, 1932, xxvi, 282 ; *International Clinics*, 1934, ii, Series 44, p. 43).

We must particularly consider thrombocytopenic and athrombopenic purpura, and *apurpuric* thrombocytopenic and thrombasthenic conditions, heredo-familial angiomatosis with recurring haemorrhages (Rendu-Osler-Weber's disease), Willebrand and Jürgens's *Die Konstitutionelle Thrombopathie*, and Hess and Glanzmann's thrombasthenia, as well as "haemorrhagiparous haemotrypsia" (Emile-Weil, Chevallier, Clerc and Levy), and Opitz and Frei's "pseudohaemophilia ex afibrinogenia" (1921). Bramwell (1907) reported, erroneously, as "haemophilia" instances of severe epistaxis in a family in which the disease *was transmitted, chiefly through the male line.*

A fairly large number (about 120 families and about 850 affected individuals) of cases of heredo-familial epistaxis, with and without angiomatosis (Goldstein), have been reported in the literature during the past forty years. This condition has nothing whatever to do with true hereditary haemophilia, familial purpura haemorrhagica, or (Riverius, Lusitanus) Werlhof's purpura haemorrhagica. This condition was first separated from true haemophilia by Rendu (1896) of Paris, who considered it "pseudohaemophilia."

A number of instances of female haemophiliacs are on record in the literature. Bulloch and Fildes (1911) mention

[1] Long Fox Lecture, 1933.

a number of such cases, collected by them in an exhaustive study of the literature. True cases of haemophilia in females (supposedly) have been reported by Tamme Beth (1829), Lafargue (1835), Kuhl (1836), Quadrat (1841), and were so considered by Grandidier (1855). Lange (1849) also speaks of *female haemophiliacs*, and found the ratio of female to male bleeders was 1:7; Grandidier considered the ratio to be 1:14. Among others who discussed the subject of female "bleeders" were: F. A. Kehrer (1876), E. Börner (1878), Immermann (1876, 1879), R. Kolster (1895), Wright, Bohm (1909).

Rieken (1829), Mende (1839), Wachsmuth (1849), J. Tamele (Prague, 1869), Cantani (1872), Börner (1878), Eve and Bidwell (1889), Gocht (1899), Beebe (1891), M. Fischer (1889), H. Fischer, Burger, Wright, Gustavo Pittaluga (Madrid, 1902), P. Stanley Blaker (1904), and others reported instances of *female haemophilia*, but Bulloch and Fildes, after their exhaustive studies, do not believe these instances to be examples of true haemophilia. Wm. Bulloch published his article on "Female Haemophiliacs and *De Novo* Cases of Haemophilia" (*Lancet*, i, 1300) in 1910.

Cases of familial epistaxis have been reported by many authors: Sir W. Fordyce (1784), P. J. Schneider (Offenburg, 1839), H. Jameson (1831), F. Steiner (1842), Wilhelm von Bippen (1842), Richard (1830), Georges, Boye (*Thèse de Paris*, 1910), William Osler (*Lancet*, 1910, i, 1226), Ed. Stainer (1910), Smith (1867), Lohmeyer (1832), P. St. Ussing (1833), E. Gintrac (1853) (doubtful instances of familial epistaxis in two brothers, one died at 24, "of cerebral congestion"), J. W. Legg (1871), Lepeyre, C. L. (*Thèse de Paris*, 1875), H. Hertzka (1881), S. Keneagy (1884), Beebe (1891), Macnamara (1884), P. Albertoni (1893), Masters (1900), Villemin (1900), D. McKenzie (1901), J. Dommartin (1903), P. Ste. Marie (1904), Godfrey (1905), Goodall (1905), B. Bramwell (1907), R. B. Davidson (1907), A. J. Swanton (1907), H. Althoff (1909), L. Frankel and L. Böhm (1909), A. Lombardi (1909), G. Cohen (1890), and numerous others. Some of these instances of "familial epistaxis" may, of course, be considered of doubtful haemophilic origin, and others may be instances of Rendu-Osler-Weber's disease (with or without evident telangiectases), thrombasthenia, or constitutional thrombopathy.

—I am, etc.,

HYMAN I. GOLDSTEIN, M.D.

Camden, New Jersey, U.S.A., Nov. 1st.

## Septum Cauterization in Asthma

SIR,—Dr. George W. Bray, in the second edition of his book, *Recent Advances in Allergy*, says: "Cauterization of the nasal septum has been advised by Francis during the past thirty years. The idea of the cauterization is to dull the receptive area in the nose, where irritative stimuli may lead to the naso-pulmonary reflex already described" (that is, bronchospasm).

I should not ask you to allow me to correct this misconception if Dr. Bray's book was not such an authoritative and standard work, and if I did not feel that the misconception was likely to retard the investigation of the successful treatment of asthma. For thirty-two years I have been doing my utmost in published papers and books to emphasize the fact that ordinary cauterization is likely to do more harm than good to the asthmatic condition. It is unfortunate that I have to use a cautery point to produce the effect I seek upon the vasomotor system.

In 1910 I stated (*Journal*, November 26th): "The merest touch which causes no local irritation or reaction is the one which produces the best result. I feel that I ought to sound a note of warning against indiscriminate nasal cauterization. When one sees the profound and diverse effects a touch with the cautery can produce upon the vasomotor system, it is necessary to proceed with caution and with some knowledge of what the effect is likely to be." In 1933 I stated (*Asthma and its Treatment*): "I cannot emphasize too strongly the fact that my method of treatment is not simply a matter of nasal cauterization. For the last thirty years I have been constantly asked why I attempt to treat a healthy nose. It seems impossible to make it understood that I am not treating the nose. . . . In cases where there is hypersensitiveness of the nasal mucous membrane the prognosis is not so good."

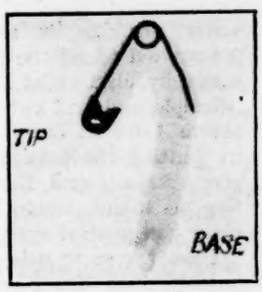
Earlier in his book Dr. Bray says (p. 105): "In Francis's view asthma is merely a symptom of vasomotor instability. . . . He has tried to show how the touching of certain points on the nasal septum was in some way connected with the stabilization of the vasomotor system." If practitioners could only realize that nasal treatment does not rely upon removing asthmogenic spots from the nose, but upon producing a stabilizing effect upon the vasomotor system, much progress would be made in giving relief to the asthmatic condition, and damage from indiscriminate cauterization avoided.—I am, etc.,

London, W.1, Nov. 15th. ALEXANDER FRANCIS.

## Swallowing of Open Safety-pins

SIR,—I was very much interested in Mr. Courtenay Yorke's suggestions (*Journal*, November 3rd, p. 811) for the treatment of cases in which open safety-pins had been swallowed. I must confess that I believe it to be the safer course to remove the pin from the stomach before it has passed into the intestine than to risk the danger of perforation. The following case is probably unique.

On the evening of August 26th, 1934, a male child, aged 8 months, swallowed an open safety-pin. An oesophagoscopy was carried out soon afterwards by Mr. R. J. Martin, but he found that the pin had passed into the stomach—this was confirmed by *x* rays. The child came under my care some hours later at the Birkenhead and Wirral Children's Hospital, and it was decided to remove the pin the following morning from the stomach. An *x*-ray was taken, but it was seen that the pin had moved on into the duodenum. In view of its inaccessibility in this region it was thought wise to defer operation. During the next few days the pin slowly moved down to the right iliac fossa, where it stuck. Laparotomy was therefore undertaken. After a search of the lower reaches of the ileum, the ileo-caecal valve, and the caecum, the appendix was carefully palpated, and to my surprise the pin was found lodged in the tip with no sign of perforation. The appendix was removed, and the child made an uneventful recovery.




Subsequently an *x*-ray was taken of the appendix with the pin *in situ* (see figure).—I am, etc.,

Liverpool, Nov. 14th. PHILIP HAWE.

## Local Treatment of Coryza

SIR,—Mr. W. C. Spackman, in the *Journal* of November 3rd (p. 835), raises the issue of local treatment of coryza in connexion with the theory "that a general infection is less dangerous if its local reaction is severe." These are not his exact words, but I understand this to be his meaning.

The two propositions are not quite identical, because the coryza is not a general infection, say, like septicaemia, but a local one, which, when it is truly inflammatory in character, will produce systemic and general symptoms, the latter being the manifestations of invasion by what may be regarded as an intranasal inoculation. His letter has provoked some very interesting contributions. Dr. Douglas Webster (November 10th, p. 882) gives a list of

remedies which he has found effective, and the merits of many of which I believe to be based upon sound principles. Dr. R. R. Woods (November 17th, p. 920) goes, in my opinion, to the root of the question when he emphasizes the importance of the changes occurring in the nose as inflammatory phenomena, due to microbic invasion, and (in the sense which I interpret him) asks what are the biological defences of the body aiming at, so far as we understand them to-day. In health we are familiar with purposeful vaso-dilatory swings when certain functions of the body demand more blood, as, for instance, the splanchnic contrasted with the cutaneous areas during the process of digestion.

In disease of an inflammatory character there is a pronounced vaso-dilatory swing (with other additional factors, too long to detail here), and when this disturbing cause is severe many of the physiological demands on vaso-dilatation pass for the time being into abeyance—for example, loss of appetite. In a true coryza, together with the local pain, heat, redness, and swelling, we have the general symptoms of toxic invasion, such as pyrexia, malaise, headache, tachycardia, chilliness (vaso-constriction), constipation (vaso-constriction), etc.

Now while the process of immunity is being developed by *vis medicatrix naturae* the rational line of treatment, as I see it, is to adopt every measure possible to get rid of the toxins, and this is best done by encouraging vaso-dilation of all the excretory organs of the body—the skin, bowels, kidneys. The time-honoured treatment for the relief of the local symptoms of inflammation is counter-irritation, producing hyperaemia at a distance. This is only vaso-dilatation, and that is why I consider Dr. Douglas Webster's treatment of gargling with hot water, drinking the same, hands and feet in hot water (or our old friend the mustard foot or body bath), hyperaemia by ultra-violet light or diathermy, are all sound in principle and will cut short a mild attack. But if it is severe I would carry this vaso-dilation a stage further by putting the patient to bed, make him perspire, and give aperients and diuretics ; this, together with eliminating his toxins, would lead to the rapid subsidence of his nasal and general symptoms.

I am averse to using any local liquid treatment in the nose in the active stage of acute inflammation, and have stated this view in published articles, because I am convinced that the patient's own protective defences against infection have already mobilized better forces to the spot than any which I can add, with our present knowledge. Inhalations of steam are soothing, and, if thought fit, may be medicated with tinct. benzoin co. ; but wearing a light gauze mask, for the greater part of the day and night, will be most comforting, practically stop sneezing and coughing, protect him from further local infection, and protect others, in some measure, from him. In an inflammatory process of the type of coryza which I visualize here many of the epithelial cells are cast off and take some weeks to regenerate, so with this knowledge it is difficult to conceive that any method of treatment can limit its activities to a few hours. There is, however, a common form of non-pyrexial disturbance of ventilation of the nasal passages, accompanied by vaso-dilation and diagnosed as a cold or coryza because the symptoms of obstruction, sneezing, and discharge occur in sequence ; but this is not inflammatory (pyrexia being the test), and the local use of vaso-constrictors, aided by any form of general hyperaemia, will give rapid relief.

That the nose is frequently attacked when the lower respiratory tract escapes is common knowledge, for which we should be truly thankful, because in its role of a respiration outpost and defensive mechanism, for the preparation and purification of air before it goes to the lungs for the vital process of oxygenation, it is not to be wondered at that it must often succumb to air-borne infection in the conditions of modern life, so long as the human mucous membrane reacts to microbic invasions. Dr. Potter's alkaline treatment (November 17th, p. 921) diminishes this susceptibility, but control of the alkaline reserve for a long period is too complicated, and has its pitfalls.—I am, etc.,

London, W.1, Nov. 19th. JOHN F. O'MALLEY, F.R.C.S.

## London University and its Medical Schools

SIR,—Sir Ernest Graham-Little has no doubt done well to draw attention to the lamentably small proportion of medical students who, having embarked upon the London M.B., B.S. course, actually obtain the degree. But I trust that no one will be so unwise as to comment upon Sir Ernest's proposal, outlined in his letter published by you on November 24th, without having something more definite in the way of an explanation of this fact than the vague remark, "the majority of students entering for the London course . . . are unable to stay the course for the third examination."

One would like to know: (1) What is the exact proportion of such students who do pass the whole of the Second M.B.? (2) What proportion of these sit once for the Third M.B.? (3) What proportion of these fail at the first attempt and in what parts? (4) What proportion of those who fail once attempt the examination a second time?

Doubtless these data are known to the Senate of the University. Whether they should be divulged in your columns I leave to the judgement of Sir Ernest. But without them any discussion of the subject, or a possible remedy, appears to me foolish.—I am, etc.,

London, W.1, Nov. 26th. ERIC PEARCE GOULD.

SIR,—Sir Ernest Graham-Little's letter, in your issue of November 24th, about degrees in London University comes at a time when revision of the medical curriculum is being widely discussed.

The first difficulty in London University arises with the First M.B. examination. I have never been able to understand why this examination is not interchangeable with that for the Intermediate Science. The length of time allotted to both courses is the same, and yet the First M.B. is definitely considered to be of a lower standard.

The First M.B. ought to be the chemistry, physics, zoology, and botany of the Intermediate Science examination. The student who changes his mind would then be able to go on with a Science degree and not have to start again at the beginning as at present.

The Second M.B. is another problem. The minimum course of study for a first degree in London University takes three years. The normal time for the Second M.B. is two and a half years. If this examination was a degree examination the course of study would have to be lengthened by three to six months. Most medical students in this University are poor men, and cannot afford the time. A few are able to spend another year and take the B.Sc. in physiology, chemistry, or human anatomy, but this number is very small.

A degree in Medical Sciences on the lines of the Tripos at Cambridge would undoubtedly encourage students to spend an extra three or six months, and would add to the popularity of the University of London. I have no doubt that the difficulties in arranging this on the lines suggested by Sir Ernest can be overcome.—I am, etc.,

Teddington, Nov. 26th. E. E. D. GRAY, M.D.

SIR,—May I, as a looker-on, be permitted to make a suggestion in support of Sir E. Graham-Little's kindly proposal for removing a hardship which many London students seriously feel? The injustice is that students who have given proof of being worthy of definite university recognition are shut out from the hope of it, often from financial reasons. An adjustment of standards, so that the affected examinations would both serve their present purpose and also worthily qualify for a degree, would solve the problem, but what name should the degree have? If care be not taken the public, already puzzled over titles, will be more bewildered than ever.

Could not the work for the proposed degree suitably become an optional course for the present B.Sc.? The prestige of the M.B., B.S., following a Science degree, would be thus enhanced. Two universities, Oxford and Dublin, only allow medical graduation to those already B.A., and surely a preliminary B.Sc. would be even more appropriate.—I am, etc.,

Liverpool, Nov. 26th. GLYNN WHITTLE.

## The Toll of War

SIR,—In proposing the toast of "The Common Health" at the Council Dinner, Professor R. J. A. Berry reminded the gathering of the triumphs of preventive medicine. He pointed out (*Supplement*, November 10th, p. 238) that "a century or two ago" every second person present, if he had survived, would probably have been heavily pitted with small-pox. He went on to speak of the diminishing mortality from disease in war. In the American Civil War 1 per cent. of the men died of typhoid, in the American-Spanish War thirty years later the death rate from typhoid had contracted to 0.1 per cent. In the European war it had shrunk to 5 per 100,000 men—0.005 per cent. Professor Berry justly concluded that medical men had every right to be proud of these achievements. Perhaps in the next war not a single soldier will die of typhoid fever!

But, Sir, there is another side to the picture. I do not refer to the fact that, if only five in 100,000 died of typhoid, 99,995 would survive to swell the casualty lists of which Mr. Lloyd George has recently reminded us. There is little difference between being a gas or shell casualty and a case of typhoid.

In the chapter "Demographic Effects of Modern Warfare" of a work published by Victor Gollancz, Ltd. (1933)[1] and based on official statistics of the countries concerned, there are some statements that must deeply interest the medical profession. From the demographic point of view victors and vanquished are on the same plane, and results depend on general conditions and the normal demographic character of the country. There is in all wars profound disturbance of the natural movement of the population and increased civilian mortality from epidemics. While in the world war typhoid was less fatal, typhus invaded Serbia, Russia, Poland, and Austro-Hungary, and influenza overran the world. Influenza was imported into Europe and India by warships and transports, thus reaching the military depots, land armies, and civil population. Great Britain had 200,000 deaths, Germany 400,000, Italy 430,000, and Spain and Portugal 200,000. In a few months in India, according to a Ministry of Health Report,[2] 8½ millions died.

The statistics of typhus, typhoid, cholera, small-pox, dysentery, malaria, plague, and pulmonary tuberculosis show that war is the affair, not of the belligerents alone, but of human beings all the world over, the surplus of deaths in neutral countries in Europe alone in 1914–18 being close on 600,000. Napoleon cynically boasted that one night in Paris would repair the losses of a battle, but nowadays the birth rate is steadily and rapidly falling, while war also so disturbs the balance of the sexes that, just after the war, in France there was a 20 per cent. excess of women between 25 and 30—25 per cent. in Germany.

The volume published by the Inter-Parliamentary Union concludes that the total deaths in the world war caused directly (military) and indirectly (civilian) are 41,435,000—a still incomplete balance sheet, for it does not include the millions of deaths from famine in Russia following the war. To that total the European contribution is 25,000,000, or more than the combined populations of Sweden, Norway, Denmark, Holland, and Switzerland.

Well, as our profession has a special responsibility in the lives of people and their deaths from bullets or from bacteria, there is surely no matter here for congratulation or complacency. I am well aware, Sir, that, as J. B. Priestley says, "it is an old worn topic: the choicer spirits begin to yawn at the sight of it; those of us who are left of that generation are, it seems, rapidly becoming mumbling old bores"; but, I sometimes wonder, is there any more important subject for us to dwell on and come to some conclusion about, or must we stand aside and leave it to others—to Parliament, to the Press, to the "City," to the "Services," to the Church?

"And, Robert Browning, you writer of plays, here's a subject made to your hand," might surely be applied to the medical profession all the world over.—I am, etc.,

Cannes, Nov. 11th. A. A. WARDEN.

## Whither General Practice?

SIR,—There has recently been in the columns of the *Journal* an interesting but rather depressing correspondence on the subject "Whither General Practice?" Unless more constructive efforts than I have observed during the last quarter of a century are made by that large section of the medical profession known as general practitioners, the answer to the question may also be given in three words: "It will wither."

At the present time efforts seem to be concentrated on giving the general practitioner opportunities of following up and attending his patients in hospital. In spite of the considerable difficulties to be overcome before arrangements enabling the general practitioner to do this can be made, this might be the starting-point of considerable medical progress. However, it has always seemed to me regrettable that the British Medical Association, while ready to honour the man and itself by electing him president in its centenary year, has paid such scant attention to the scheme which Lord Dawson first outlined in the Cavendish Lecture which he delivered to the West London Medico-Chirurgical Society soon after the war. In this scheme the primary centre, the centre of first interest to the general practitioner, formed a most important part.

Not having at his disposal all the resources—electrotherapeutic, radiological, pathological—such a centre would provide, the general practitioner is apt to persuade himself he can do very well without them—an impossible assumption at the present time—and is disappointed at finding his patients leaving him to attend the well-equipped hospitals. Something might be done to over-

[1] *What Would Be the Character of a New War?* Pp. 275 *et seq.* An inquiry organized by the Inter-Parliamentary Union, Geneva.

[2] Ministry of Health Report on the Pandemic of Influenza 1918–19, London, 1920 (p. 286): "The military censorship forbade the publication of news concerning the progress of the epidemic in the belligerent countries during the war. It was only after the epidemic had invaded the neutral countries, Spain in particular, that the Press was able to speak of it freely. That is probably why it has been given the name of Spanish influenza."

come these deficiencies of equipment by amalgamations of practitioners in urban districts such as are now so frequent in rural areas, but external help, voluntary or State, would seem to be necessary before a satisfactory system of primary centres could be founded. Such centres would, by ensuring the more satisfactory treatment of disease in its early stage, save the expenditure of much money on buildings necessary for the treatment of disease in its later stages.

Can it be that the interest in the early manifestations of disease aroused by the late Sir James Mackenzie has already died down?—I am, etc.,

London, W.8, Nov. 19th. HAROLD H. SANGUINETTI.

## Ronald Ross and the Panama Canal

SIR,—In the *British Medical Journal* of November 17th (p. 917), Lord Leverhulme is reported as having stated with reference to the Liverpool School of Tropical Medicine: "In the past the School rendered it possible for 40,000 persons to live and work in the region of the Panama Canal, where once 90,000 had perished." Lord Leverhulme has been misinformed. The French abandoned the attempt at constructing the Panama Canal after suffering terrific mortality from both malaria and yellow fever. Subsequently the U.S.A. Government, through Surgeon-General Walter Wyman, head of the American Public Health Department, invited Sir Ronald —then Major—Ross to join the Isthmian Canal Commission. The recommendations proposed by Sir Ronald Ross having been carried out, white men were enabled to live in the region and complete the construction of the canal. Hence it was not due to any medical school but through the genius of one man that the Panama Canal reached completion.

America freely acknowledged her debt of gratitude to Sir Ronald Ross at the time. Most people in Great Britain to this day are ignorant of his achievement. It is at least incumbent on those who (like the writer) had the great privilege of knowing, and studying under, the late Sir Ronald Ross, to salute and honour "the mighty dead." I desire to add that my memory of the Liverpool School of Tropical Medicine is very grateful and very dear.—I am, etc.,

Canterbury, Nov. 21st. J. CHAS. RYAN, D.T.M.Liverp.

## Tests for Colour-blindness

SIR,—The Medical Research Council has issued a report on colour-blindness in which it is stated that the apertures of two lanterns bearing my name differ. They were made by different makers, and I can find no evidence that the defective lantern was ever examined by me. It was made by makers whom I gave up, as they sold lanterns without submitting them to me. Obviously I cannot be responsible for a lantern I have not examined and certified as accurate. I sometimes have to reject a whole batch. There are lanterns bearing my name which are grossly inaccurate.—I am, etc.,

Board of Trade, London, S.W.1, Nov. 23rd. F. W. EDRIDGE-GREEN.

## X-Ray Cinematography

SIR,—You have been kind enough to mention my recent work on *x*-ray cinematography in the *Journal* several times this year. I should like to record the fact that I am now able to make a cinematograph record of the electrocardiograph tracing and of the heart shadow simultaneously on the same film.—I am, etc.,

London, W.1, Nov. 24th. RUSSELL J. REYNOLDS.

# Obituary

## J. STRICKLAND GOODALL, M.B.,

F.R.C.S.Ed., M.R.C.P.

Physician, National Hospital for Diseases of the Heart

The death of Dr. Joseph Strickland Goodall at the comparatively early age of 60 has come as a great shock to his many friends both inside and outside the medical profession.

Dr. Goodall came from a long line of medical men extending back for six generations, one of whom was President of the Royal College of Physicians. His father was senior surgeon in the Queensland Government Service. He was born in 1874 in Queensland, and spent part of his boyhood in Thursday Island. He was educated at Harrow School and at the Middlesex Hospital, whence he graduated M.B. in 1900. He entered Middlesex Hospital as senior scholar in 1895, and became demonstrator of biology and senior demonstrator of physiology in 1898. He was appointed lecturer on biology to the City of London School and professor of biology and physiology at the City of London College in 1899, lecturer on biology at the Middlesex Hospital in 1900, and lecturer on physiology and pathological chemistry in 1903.

For many years he ran, in conjunction with Professor Earle of Shanghai, an extremely successful and popular course in physiology for the Primary F.R.C.S., which attracted students from all parts of the Empire, and there must be many well-known surgeons at the present time who owe to Dr. Goodall their success in this early and important branch of surgery. In July, 1908, he was appointed subdean of the Medical School of the Middlesex Hospital and member of the School Council. He obtained his F.R.C.S.Ed. in 1910, and the same year was elected F.R.S.Ed. In 1914 he was elected to the staff of the National Hospital for Diseases of the Heart as assistant physician, and became full physician in December, 1923. He obtained his M.R.C.P. in 1915. For many years he was examiner in physiology and biology at the Society of Apothecaries.

During the war Dr. Goodall was consulting cardiologist to the War Office and to the Australian hospitals, retiring after the armistice with the rank of major. During these years he examined and reported on the cardiovascular system of ten thousand recruits. In 1925 he founded a cardiological clinic in connexion with the South Metropolitan Gas Company, and this he still actively supervised up to his death. It was the first clinic of industrial cardiology to be established in this country. He was the first physician in London to restrict his practice to pure cardiology. An extremely hard worker with an enormous consulting practice, he yet always seemed to find time to give helpful advice to his old students, and, indeed, unfailing kindness to all was an integral part of his character.

Dr. Goodall possessed a brilliant brain, full of original ideas, which he was not afraid to employ in the treatment of his patients. The fact that many of these have taken their place as the accepted treatment among large numbers of the profession goes to prove the exactitude of his reasoning. He was to some extent unorthodox in his views, and had no use for the accepted shibboleths unless he could prove their value from personal experience. He was an extremely good teacher, both of physiology and of cardiology, and had to the full the facility of explaining difficult problems in simple language. He kept up his interest in physiology throughout his life, and was vice-president of that Section of the British Medical Association in 1914. His physiological training enabled him early

to realize the value of the electrocardiograph in the accurate diagnosis of heart disorders. He worked with the late Professor Augustus Waller on the capillary electrometer in the investigation of heart currents, and had installed in the Middlesex Hospital a string-galvanometer as early as 1910. He was thus one of the earliest physicians to use the electrocardiograph in the routine examination of cardiac patients, and many of the electrocardiographic phenomena were first noted by him. In later years his interest from the electrocardiographic standpoint was chiefly towards the elucidation of diseases of the myocardium, and he has contributed many papers and lectures on toxic myocarditis.

He was early interested in the heart in Graves's disease, and his researches in this branch of cardiology have formed the basis of most of the recent work on the thyrotoxic heart. He published many papers, both in this country and in the United States, on various cardiological subjects, and his reputation as a cardiologist was world-wide. For several years Dr. Strickland Goodall was responsible for the cardiovascular section of Savill's *Textbook of Medicine*.

He was a man of very strong personality, beloved by his many patients, rich and poor alike, to whom he never failed to give not only the utmost of his skill but also his unfailing sympathy and understanding. Those of us who knew him intimately felt there was no problem or trouble taken to him which would not receive his most careful and balanced counsel. His death leaves an irreplaceable gap, and many of us will feel lonely indeed when we pass by his familiar door. He was a keen yachtsman, a Liveryman of the Society of Apothecaries, and a Governor of the City of London College. He leaves a widow and one son, to whom the sympathy of the profession is extended.

T. J. H.

Mr. LAMBERT ROGERS writes from the Surgical Unit, Welsh National School of Medicine:

To his many friends the death of Dr. Strickland Goodall will mean a sense of profound loss, for his was an outstanding personality. It is difficult for one who was a student of his, a friend of many years' standing, and on several occasions a patient under his care, to pay adequate tribute to his great ability as a teacher, his kindness, consideration, and helpfulness as a friend, and the supreme confidence and encouragement which he inspired as a doctor. The originality of his thoughts, the clarity of the language in which they were clothed, the calm dignity of his bearing, and the singular directness and simplicity of his manner made a deep impression. If intuition is an instinctive summing-up of memories and other evidences collected by the special senses and correlated by consciousness, one felt that he had it in high concentration; and with him also the study, the teaching, and the practice of medicine were an absorbing passion. One instinctively felt that Dr. Goodall had the Nelsonic attributes of self-reliance, power of initiative, fearlessness of responsibility, and extreme fertility of resource, and his mere presence left his patient with more hopefulness and vitality. When as a young man Sir Richard Douglas Powell asked him what he intended to do and he replied that he intended to concentrate upon and practise cardiology exclusively, Sir Richard said: "You will never make a living from cardiology only." His reply was: "I intend to try, Sir." There was something of John Hunter in his make-up as well—this willingness to try. His students loved him, and looked on him as a tower of strength, and while many of us who were his friends will always be grateful for having known him, at present we cannot but feel a deep sense of loss and sadness, for we may not look upon his like again.

By the death of Dr. ROBERT MONTGOMERY RENDALL, on November 8th, in a nursing home at Bournemouth, following an operation, Nottingham has lost a well-known and much respected citizen, who has not only left behind him a long record of honorable professional work but has also made his mark in the municipal affairs of the city. A Dorsetshire man, a son and grandson of doctors, Dr. Rendall received his training at Guy's Hospital, qualifying M.R.C.S., L.R.C.P. in 1906, and after a period as house-surgeon at Barnstaple and Kidderminster he went to Nottingham in 1910. During the war he served with the R.A.M.C. in East Africa, but on being demobilized in 1919 he resumed his practice in Nottingham. Dr. Rendall took a keen interest in the affairs of the city of his adoption, and became a member of the city council in October, 1922, until this present November, when he did not seek re-election. His principal work on the council was done as chairman of the Mental Hospital and Mental Deficiency Committees. He also was much interested in medical politics, being honorary secretary from 1914 to 1927 and chairman from 1928 to 1931 of the Local Medical and Panel Committee. He was also chairman of the Medical Benefit Subcommittee of the Insurance Committee in 1931–2. At the Nottingham meeting of the British Medical Association in 1926 he was honorary secretary of the Section of Medical Sociology. Mr. A. M. WEBBER, F.R.C.S., writes: As one who has known Rendall since we were students together at Guy's, I can say that he was fearless in his determination to right a wrong, especially when the wrong concerned one of his patients. He was devoted to his practice, and was beloved by his patients. He spent as much time and interest on his panel patients as on his private ones. During his long illness he always showed great courage in facing his troubles, and was cheery and optimistic to the end. He leaves a widow, to whom our heart-felt sympathy goes out.

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The following well-known foreign medical men have recently died: Dr. BERNHARD PANZER, an eminent laryngologist of Vienna; Dr. HANS BOIT, extraordinary professor of surgery and senior surgeon to the municipal hospital at Königsberg, aged 58; Professor Dr. VIKTOR MATAGA, the first Austrian minister for social welfare, aged 77; Dr. PAUL REYHER, extraordinary professor of children's diseases and director of the Kaiser and Kaiserin Friedrich Children's Hospital at Berlin, aged 58; Dr. CARL ARTHUR HEDBLOM, professor of surgery at the University of Illinois, Chicago, of coronary thrombosis, aged 55; and Professor TERNI, director of the National Institute of Serotherapy at Naples, aged 70.

## The Services

### DEATHS IN THE SERVICES

Surgeon Rear-Admiral Alexander Gascoigne Wildey, C.B., R.N. (ret.), died at Churt, Surrey, on November 20th, aged 74. He was born in 1860, the son of William Wallace Wildey, M.D., R.N., was educated at Felsted School and Guy's Hospital, and took the M.R.C.S. and L.S.A. in 1882. Entering the Navy in 1884, he became fleet surgeon in 1900, deputy surgeon general in 1912, and surgeon rear-admiral in 1918, retiring in 1920. As staff surgeon he served in H.M.S. *Cruiser*, a training ship; as fleet surgeon in the battleships *Revenge* and *Illustrious*, and when the war began was at Haslar Hospital. He subsequently served as senior operating surgeon in the naval hospitals at Chatham and Plymouth. In January, 1916, he was appointed to the charge of Gibraltar Hospital; and in 1918, on promotion to surgeon rear-admiral, to the charge of Haslar Hospital, where he remained till his retirement in 1920. He was created C.B. in 1919, and also was an Officer of the Legion of Honour, a Commander of the Order of the Crown of Italy, and received the American Naval Cross. He held also the Gilbert Blane medal, and edited the surgical section of the official naval medical history of the war. In 1889 he married Ruth Amy, daughter of the late paymaster-in-chief, William Horniman, R.N., and had one son and one daughter. At the Annual Meeting of the British Medical Association held at Cambridge in 1920 Admiral Wildey was a vice-president of the Naval and Military Section.

# Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week completed its discussion on the Address in reply to the King's Speech, and had a second reading debate on the Electricity Supply Bill. The business of the House of Lords was light.

An Educational Endowments (Scotland) Bill, extending by a further period of two years the powers of the commissioners appointed by the Educational Endowment (Scotland) Act, 1928, was presented in the House of Commons on November 21st by Sir Godfrey Collins.

On November 26th Mr. Oliver Stanley presented the Depressed Areas (Development and Improvement) Bill, to provide for the initiation, organization, prosecution, and assistance of measures designed to facilitate the economic development and social improvement of the depressed areas, and for the appointment of Commissioners for those purposes. The Bill was read a first time.

## Infant and Maternal Mortality Figures

Mr. SHAKESPEARE informed Mr. Thorne, on November 26th, that during 1933 there were in Preston 88 deaths of infants under 1 year for each 1,000 births. In Oldham the figure was 72 per 1,000; in Accrington 47 per 1,000; in the metropolitan borough of Wandsworth 51 per 1,000; in West Ham 64 per 1,000; and in the metropolitan borough of Poplar 54 per 1,000. Mr. Shakespeare, replying to Mr. Thorne, circulated, on November 27th, a lengthy tabular statement giving the maternal mortality per 1,000 (live and still) births in a large number of towns and in the Welsh counties in 1933. The statement showed the rate to be as follows:

| | | | |
|---|---|---|---|
| Dewsbury ... ... | 6.15 | Cardiganshire ... ... | 9.60 |
| Rochdale ... ... | 2.71 | Carmarthenshire ... | 6.61 |
| Huddersfield ... ... | 8.81 | Denbighshire .. ... | 7.12 |
| Blackburn ... ... | 2.60 | Flintshire ... ... | 4.06 |
| Poplar ... ... ... | 1.70 | Glamorganshire ... | 6.45 |
| Wandsworth ... ... | 5.27 | Merionethshire ... ... | 4.80 |
| Shoreditch ... ... | 3.87 | Monmouthshire ... | 6.78 |
| West Ham ... ... | 1.75 | Montgomeryshire ... | 6.64 |
| Anglesey ... ... | 6.85 | Pembrokeshire ... .. | 4.99 |
| Brecknockshire... ... | 2.30 | Radnorshire ... ... | 3.10 |
| Carnarvonshire... ... | 5.14 | | |

## National Health Insurance

Replying to Mr. Llewellyn-Jones, on November 22nd, Sir HILTON YOUNG stated that the approximate number of persons who were notified by approved societies as ceasing to be entitled to medical benefit on December 31st, 1933, by reason of prolonged unemployment, and were not subsequently notified as having resumed employment, was 89,000 in England and 17,000 in Wales. The figures included a substantial number of persons (estimated at about 10 per cent.) who failed to prove that they had continued, up to the end of 1933, to be available for, and unable to obtain, employment. These would not have remained entitled to medical benefit if the Prolongation of Insurance Acts had continued in force. The ordinary medical services would be open to them thereafter. Corresponding figures to June 30th, 1934, were not available.

Sir HILTON YOUNG told Mr. Llewellyn-Jones, on November 22nd, that since 1924 a limited sum of money had been available from national health insurance funds for the improvement of telephone facilities in connexion with the provision of medical benefit in remote rural areas. During the last three years £837 had been expended for this purpose in response to applications from insurance committees in England and Wales.

Mr. SKELTON told Mr. Rhys Davies that the position of manual labour contractors under the National Health Insurance Acts was being watched to ascertain whether any alteration of the law was needed. Certain killers in Glasgow slaughterhouses, who entered insurance in 1929 as manual labour contractors, were not now regarded as compulsorily insurable, but had been advised that they might continue as voluntary contributors.

*Death from Post-vaccinial Encephalomyelitis.*—Sir HILTON YOUNG told Mr. Groves, on November 22nd, that he was aware of the death of a nurse, aged 20, at the Queen's Hospital, Birmingham, on October 16th, from post-vaccinial encephalomyelitis, and that Professor Haswell Wilson, a pathologist at Birmingham University, had stated that the condition was due to a reaction of the vaccine, and that the girl would probably not have died if she had not been vaccinated. The lymph used in this case, he understood, was supplied by an establishment licensed under the Therapeutic Substances Act. He was not aware of any enactment under which compensation could be paid in such a case.

*Vaccination.*—Replying to Mr. Groves, on November 22nd, Sir JOHN GILMOUR stated that during the years from 1924 to 1933 the number of persons proceeded against in England and Wales for offences against the Vaccination Acts, 1867 to 1907, the number of such persons fined, and the number of orders directing vaccination made under Section 31 of the Act of 1867 were as follows:

| Year | Persons Proceeded Against | Number Fined | Number of Orders to Vaccinate |
|---|---|---|---|
| 1924 ... ... | 246 ..... | 155 ..... | 255 |
| 1925 ... ... | 221 ..... | 143 ..... | 192 |
| 1926 ... ... | 176 ..... | 118 ..... | 138 |
| 1927 ... ... | 148 ..... | 114 ..... | 136 |
| 1928 ... ... | 182 ..... | 131 ..... | 185 |
| 1929 ... ... | 129 ..... | 100 ..... | 82 |
| 1930 ... ... | 119 ..... | 85 ..... | 73 |
| 1931 ... ... | 73 ..... | 52 ..... | 65 |
| 1932 ... ... | 87 ..... | 65 ..... | 76 |
| 1933 ... ... | 118 ..... | 100 ..... | 43 |

*Town and Country Planning.*—In reply to Sir Francis Fremantle, on November 22nd, Sir HILTON YOUNG said that, at his request, the Advisory Committee on Town and Country Planning had considered draft model clauses, designed to assist local authorities in the preparation of planning schemes, and had made recommendations, which were receiving his consideration. The committee's activities would be recorded in the annual reports of the Ministry of Health. Sir Hilton further informed Sir Francis Fremantle that the report of Lord Marley's committee, on satellite towns, would be presented in time to be considered in relation to the Overcrowding Bill.

*Farnborough Institution Hospital.*—Mr. Thorne, on November 26th, asked the Minister of Health if he could give any information on the alleged dissatisfaction at the Farnborough Institution Hospital, but Mr. SHAKESPEARE replied that the Minister of Health had no information beyond what had appeared in the Press. The Minister had received no representations with regard to the matter, but was communicating with the Kent County Council, which administered this hospital.

*Gas Detection in Mines.*—On November 27th Mr. ERNEST BROWN informed Mrs. Ward that last week discussions took place with the Mineworkers' Federation on the draft regulations dealing with the provision of means for detection of gas in mines by workmen underground. Although these regulations were based very largely on the recommendations of the Miners' Lamps Committee of 1922, they were not acceptable to the Mineworkers' Federation. He was considering the objections made by that body.

*Increase in Number of Suicides.*—On November 27th Mr. SHAKESPEARE informed Sir Arnold Wilson that the attention of the Minister of Health had been called to Table 25 of the Registrar-General's Statistical Review showing that cases of suicide had increased from 3,759 in 1921 to 5,743 in 1932, with an increase of nearly 60 per cent. in age groups of 25 and under, and that cases of attempted suicide had increased since 1920 to 1924 from 41.8 per million to 82.1 per million in 1932. The subject had been dealt with from time to time in past reports of the Chief Medical Officer of the Ministry, and would not be lost sight of in future.

# Universities and Colleges

## UNIVERSITY OF OXFORD

*Rolleston Memorial Prize, 1936*

The Rolleston Memorial Prize, which is now of the value of about £100, is awarded every two years for original research in any subject in animal and vegetable morphology, physiology and pathology, and anthropology.

No candidate will be eligible (1) who has not either passed the examinations for the B.A. or B.M. degrees at Oxford, or for the B.A. or M.B. degrees at Cambridge, or been admitted as an advanced student, or as a student for the degree of B.Litt. or B.Sc. at Oxford or as a research student for the degree of M.Litt. or M.Sc. or Ph.D. at Cambridge; (2) who has exceeded a period of six years from attaining one or other of these qualifications, or from his attaining the first of such qualifications, if he has attained more than one; (3) who has exceeded ten years from his matriculation. The next award will be made in Trinity Term, 1936. Candidates wishing to compete must forward their memoirs, together with a statement of their present status, where the work was done, and the supervision, if any, which they had, to the Registrar of the University of Oxford before March 30th, 1936. The memoirs may be printed, typewritten, or in manuscript; should be inscribed "Rolleston Memorial Essay"; and should bear the name and address of the author. Memoirs already published are admitted to the competition. For the qualifications of candidates see the *University Calendar* for 1934 (p. 152). No account will be taken of any research which has not been prosecuted by the candidate subsequent to his matriculation.

*Radcliffe Travelling Fellowship*

An examination for a Radcliffe Travelling Fellowship of the annual value of £300, and tenable for two years, will be held at the University Museum commencing on February 19th, 1935, at 10 a.m.

Candidates must have passed all the examinations required by the University for the B.A. and B.M. degrees. They must not have exceeded four years from the time of passing the last examination required for the B.M. The successful candidate must before election declare that he intends to devote himself during the period of his tenure of the Fellowship to the study of medical science, and to travel abroad with a view to that study. The Fellowship will be vacated *ipso facto* by a Fellow who spends more than twelve months in the whole within the United Kingdom. The examination will occupy four days. Papers will be set in physiology, pathology, and preventive medicine, and a subject will be proposed for an essay. There will also be a practical examination in pathology. Any candidate desiring to offer in addition a special branch of either medicine or surgery must send notice of this to the Regius Professor of Medicine by February 14th. Intending candidates should send their names, addresses, qualifications, etc., to the Regius Professor of Medicine, University Museum, by February 14th.

At a congregation held on November 24th the following medical degrees were conferred:

D.M.—H. W. Allen.
B.M.—A. G. Palin, R. Kempthorne.

## UNIVERSITY OF CAMBRIDGE

Alan Nigel Drury, M.A., M.D., of Gonville and Caius College, Huddersfield Lecturer in Special Pathology, has been elected into a Supernumerary Fellowship at Trinity College.

The Raymond Horton-Smith Prize has been awarded to Herman Taylor, M.D., M.Chir., St. John's College, for his M.D. thesis, "Osteitis Fibrosa, and Experimental Study." Honourably mentioned: W. G. Oakley, M.D., B.Chir., Gonville and Caius—subject, "The Erythrocyte Sedimentation Rate in Nephritis"; and H. B. Stallard, M.D., B.Chir., Gonville and Caius—subject, "Radium as a Therapeutic and a Pathogenic Agent in Certain Ophthalmic Disorders."

## SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated:

SURGERY.—L. Banszky, J. E. Darlow, C. McK. Johnston, L. A. Lewis, B. S. Minden, J. F. L. Walley, G. Williams, W. C. Winterbottom.

MEDICINE.—J. E. Darlow, D. S. G. Genge, M. T. Hirst, H. M. R. Waddell, G. Williams, J. E. G. Wright.

FORENSIC MEDICINE.—J. A. Amor, E. St. M. Brett, J. E. Darlow, F. M. Kerry, W. E. Whaite, G. Williams, W. C. Winterbottom.

MIDWIFERY.—C. J. Dandekar, J. E. Darlow, F. A. Frank, H. G. Howitt.

The diploma of the Society has been granted to L. Banszky, J. E. Darlow, F. A. Frank, H. G. Howitt, C. McK. Johnston, F. M. Kerry, and L. A. Lewis.

## UNIVERSITY OF LONDON

A meeting of the Senate was held on November 21st, with the Vice-Chancellor in the chair.

The title of Reader in Industrial Physiology was conferred on G. P. Crowden, M.Sc., M.R.C.S., in respect of the post held by him at the London School of Hygiene and Tropical Medicine.

# Medical News

H.R.H. the Duke of York will preside at the Industrial Welfare Society's dinner at the May Fair Hotel on December 11th. Other speakers will include Viscountess Snowden, Mr. B. Seebohm Rowntree, Dr. W. J. O'Donovan, M.P., and Mr. Robert R. Hyde. Further particulars may be obtained from the secretary of the society, 14, Hobart Place, S.W.1.

H.R.H. The Princess Royal will attend a meeting at the Mansion House, on Tuesday, December 11th, at 2.45 p.m., on behalf of the reconstruction appeal for the Hospital for Sick Children, Great Ormond Street. The Lord Mayor will preside, and the Archbishop of Canterbury will be the chief speaker.

The new and reconstructed buildings of the Infants Hospital, Vincent Square, Westminster, S.W., will be opened by the Princess Royal on Tuesday, December 11th, at 3.45 p.m.

The annual dinner of the Medico-Legal Society will be held at the Holborn Restaurant, London, on Friday, December 14th, at 7.15 p.m., with the president, Sir Bernard Spilsbury, in the chair.

The annual dinner of the Old Epsomian Club will be held on Thursday, December 13th, at the Hotel Great Central, Marylebone Road, N.W., at 7 for 7.30 p.m. The principal guest of the evening will be Lord Leverhulme, the new president of Epsom Club.

A symposium on "Technical Aspects of Emulsions" will be held at the Royal Society of Arts, John Street, Adelphi, W.C.2, on Friday, December 7th, from 10 a.m. to 6 p.m., under the auspices of the British Section of the International Society of Leather Trades Chemists. Professor F. G. Donnan, F.R.S., will preside.

The next series of lectures and demonstrations on tropical hygiene, intended for men and women outside the medical profession proceeding to the Tropics, will be given by Lieut.-Colonel G. E. F. Stammers and Sir Malcolm Watson from December 10th to 14th (from 3.30 to 5 p.m. each day). Particulars can be obtained from the organizing secretary, Ross Institute of Tropical Hygiene, Keppel Street, W.C.1.

A series of lectures on cancer will be given in the lecture theatre of the Cancer Hospital (Free), Fulham Road, S.W., on Thursdays at 4 p.m. from January 3rd to April 11th, 1935, inclusive. No charge is made for attendance at the course, which is open only to medical practitioners. The individual lectures will be announced week by week in the diary column of the *Supplement*.

Dr. F. R. Seymour will give a public lecture under the Chadwick Trust on "Men and Masses: Phases of Man's Relation to Disease" in the lecture theatre of the London School of Hygiene and Tropical Medicine, Keppel Street, W.C., on Monday, December 10th, at 5.30 p.m.

The Deutsche Gesellschaft für Wissenschaftliche Filme of Berlin is giving a private demonstration of German medical and surgical fims in the Academy Cinema, 156, Oxford Street, London, W., on Sunday, December 16th, at 11 a.m. Members of the medical profession are invited to attend. Admission is free on presentation of a visiting card. The following films will be shown: fertilization and first segmentation of the rabbit ovum; version and extraction in transverse lie; normal and malignant cells *in vitro*; tumours of the brain, technique of operation after Olivecrona; action of the heart; and cholecystectomy in empyema of the gall-bladder.

The Fellowship of Medicine (1, Wimpole Street, W.) announces that lecture-demonstrations will be given at 11, Chandos Street, W., on December 4th and 11th, at 2.30 p.m. ; also lectures on Wednesdays at 8.30 p.m., on diet and dietetics. On December 8th, at 3 p.m., at the National Temperance Hospital, Dr. B. T. Parsons-Smith will demonstrate heart cases. There will be a special M.R.C.P. course in chest diseases at the Brompton Hospital on Wednesdays and Fridays, at 5 p.m., from December 12th to January 11th (excluding Christmas week). Courses for the New Year are being arranged as follows: cardiology, at the National Hospital for Diseases of the Heart, January 14th to 25th ; urology, at St. Peter's, January 21st to February 2nd ; diseases of the heart and lungs, at the Royal Chest Hospital, January 19th and 20th ; manipulative surgery, January 29th to February 1st ; a series of surgical tutorial classes on Tuesday and Thursday evenings, at the National Temperance Hospital ; and a series of demonstrations at the Wellcome Museum of Medical Science, on Thursday afternoons. Full details of all these courses (which, with the exception of the cardiology course, are open only to members and associates of the Fellowship) will be available shortly.

Sir Henry Wellcome, founder of the Wellcome Research Institution, London, was received at the Elysée in Paris, on November 23rd, by President Lebrun, who decorated him with the cross of the Legion of Honour.

The Treasury, on the recommendation of the Import Duties Advisory Committee, has made an Order adding to the free list as from November 26th, 1934, catalogues not being trade catalogues ; and advertising material, not being trade advertising material. Some time ago the Treasury, on the recommendation of the committee, removed from the free list and imposed additional duties on catalogues and advertising material other than such as are imported by post in a packet not exceeding 8 oz. in gross weight. In making its recommendation at that time the committee had in mind bulk importations of such catalogues and advertising material as are issued by way of trade or business ; but the effect has been to subject to duty, when imported in bulk, certain literature, particularly learned publications, which it was not the committee's intention should be so charged. The purpose of the latest recommendation and Order is to exempt this literature from duty.

The American Association for the Study of Goiter again offers the Van Meter prize award of 300 dollars and two honorable mentions for essays provided they meet the standards of the award committee. The essays should be based on original research work on the subject of goitre, preferably its basic cause. The prize essay or its abridgement is to be presented at the annual meeting of the Association to be held in Salt Lake City, Utah, in June, 1935. Competing manuscripts should be in the hands of the corresponding secretary, W. Blair Mosser, M.D., Kane, Pa., not later than April 1st, 1935. The first prize of 300 dollars for the 1934 meeting was awarded to M. A. B. Brazier, Ph.D., B.Sc., London, England, for her essay "The Impedance Angle Test for Thyrotoxicosis." First honourable mention was awarded Professor Ugo Cerletti, Genoa, Italy, for his essay "Three Years of Experimental Research in the Etiology of Endemic Goitre." Second honourable mention was awarded D. Roy McCullagh, M.D., Cleveland Clinic, Cleveland, Ohio, for his essay "Studies in Blood Iodine, using a New Chemical Method."

New methods in the diagnosis and treatment of rheumatic diseases will be discussed at a medical meeting of the Charterhouse Rheumatism Clinic (15, Portland Place, W.) on Thursday, December 13th, at 5 p.m. Medical practitioners are invited to attend, but should inform the secretary, as the accommodation is limited.

An International Therapeutic Union has recently been founded in Paris, on the initiative of the Société Française de Thérapeutique, under the presidency of Professor Loeper of Paris. The new society will meet once a year, and will hold a congress every three years. The first of the kind will take place in 1936 at Berne, under the presidency of Professor Burgi.

The Société de Neurologie of Paris has awarded the Déjerine prize to Dr. Laruelle, head of the neurological centre in Brussels, for his work on the microscopical anatomy of the spinal cord in segmental longitudinal sections.

Mr. Frederick Priestman, a former mayor of the City of Bradford, left £137,336. His bequests included £10,000 to Bradford Royal Infirmary, less any sums paid in his lifetime, towards the fund for building a new infirmary.

After allowing for certain bequests amounting to some £7,200, the residue of the estate of Mr. J. A. Atkin of Highgate, who left £39,341, goes to King Edward's Hospital Fund.

The King has appointed Dr. G. L. Milburn to be an official member of the Executive Council of the Presidency of Saint Christopher and Nevis.

The academic council of the University of London has passed a resolution recognizing the Institute of Medical Psychology as an approved clinic in connexion with the post-graduate diploma in psychology.

According to official statistics there are at present fifty-one lepers in Norway, thirty-six of whom are in two hospitals at Bergen and two in a hospital at Oslo, while thirteen are mild cases isolated in their own homes.

Professor Sacquepée has been elected to the Académie de Médecine, in the place of the late Dr. Calmette.

An Italian Society of Anaesthesia and Analgesia is being founded in Rome on the initiative of Professors Alessandri, Tusini, Uffreduzzi, and Dogliotti.

A historical surgical museum has been founded in the Institute of Experimental Surgery at Buenos Aires under the presidency of Professor G. B. Arana.

# Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

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The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin* ; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh* ; telephone: 24361 Edinburgh).

## QUERIES AND ANSWERS

### *Chronic Enlargement of the Lip*

DR. H. L. PEARSON writes: I should be glad if any fellow reader could give me a hint regarding the treatment of macrocheilia. The patient is a middle-aged woman, and the duration of the trouble under a year ; it affects only the lower lip. She had a deep, septic fissure in the middle of the lower lip, and some carious teeth ; all the teeth were taken out some months ago ; and the mouth is clean and the fissure healed. The Wassermann reaction is negative. Potassium iodide, 30 grains, t.i.d., has been and is still being given. A consultant has suggested excision of a V-shaped piece of the lower lip. Can anyone offer an alternative?

### Quinoidine

Dr. D. PATERSON LEIPER (Glasgow) writes: I shall be much obliged if any of your readers can inform me as to the method adopted by Bence-Jones in the extraction of "quinoidine" from the skin, and the chemical tests used for the detection of this substance.

### Priapism After Circumcision

Dr. J. BARCROFT ANDERSON (Hampstead, N.W.3) writes: The condition "D. R." refers to in his query (November 24th, p. 975) is probably due to the subcutaneous fibrous ring which surrounds the base of the penis being too small. It should be as easy to dilate it as to dilate the prepuce in the manner recommended by the late Dr. Whitla of Belfast. I have noticed that in some South African natives this ring seems to be almost absent.

### European Children in the Tropics

Dr. JAMES GARDNER writes from Gourock: I have been asked the following question, and as I cannot answer it I pass it on to the *Journal*. Why is it that English people cannot live in the coast towns of Java the whole year round, but have to go up to the hills part of the year, and have to send their children home to England for their health, whilst Dutch couples will go out to Java, live in the coast towns all the year round, and rear and educate their children there, and maintain their health without sending them home to Holland? The question arises from the general statement that the children of English parents, born in the hot countries of the East, have to be sent home to England before they are seven years old, otherwise they will die or become ill both bodily and mentally. Naturally, I am writing on the assumption that the statement about the Dutch children is true, and I am assured that it is, and I am also under the impression, from what I have read, that the Dutch do settle, live, and thrive in the hot climate of Java, and make it their home in a way the English have never done in India.

### Income Tax

#### *Resident Patient—Expenses*

"J. B. D." has had a resident patient since August 7th; he is liable to pay 10 per cent. of the first year's fees to the bureau through which the arrangement was made. Is this deductible?

*** Yes. It is a reasonable expense, analogous to fees payable to a house agent for a furnished letting. In addition, of course, "J. B. D." can deduct a reasonable proportion of the general household expenses, according to the quality of the dietary and accommodation afforded.

#### *Purchase of Practice—Basis of Accounts*

"O. P. G." has bought a practice, and the accounts for his first year have just been completed. The local inspector objects to the cash basis, and wants an account on "a credit basis." "O. P. G." states that "the return will then run on the amount earned for five, not four, quarters."

*** The inspector is correct in his objection to the cash basis for the first year or two, unless the outstanding debts have been purchased and are being brought into the account. The point is that income is taxable when earned, not when received. Where an account is prepared on a basis of total bookings the debts outstanding should be valued as at the commencement and end of the period, and the increase or decrease in the anticipated loss brought into the account. The simplest method is to start from the cash takings and add (or deduct) the increase (or decrease) in the net value of the outstanding debts. It is admittedly particularly difficult to value medical debts, but this is usually appreciated by inspectors. We do not follow the contention that five quarters' income will be brought in if, as is understood, the account is for a year only.

#### *Foreign Dividends: Blocked Account*

"J. P." refers to a previous reply—in the *Journal* of November 25th, 1933—and forwards his local bankers' credit note showing that his "pesos" account has been credited with a dividend less United Kingdom income tax.

*** It would seem that the paying agents here of the Chilean company have been put in possession of credits, and to that extent remittance to this country has been made and tax properly, therefore, deducted, but that so long as the account remains "blocked" "J. P." cannot draw on it. Such arrangements, however, may differ in point of detail—possibly the bank manager can give further particulars of the precise nature of the "blocking" scheme. It may be added that presumably the same restriction applies to the amount deducted as tax—that is, the Revenue Department is as unable to get the tax into its coffers as "J. P." is to get the net dividend into his pocket.

#### *Dominion Income Tax on Colonial Pension*

"X Z" has a Colonial pension on which Dominion income tax has been paid at 7¼d. in the £—that is, the "appropriate rate." The English department claims that he cannot be repaid the whole of this Dominion tax.

*** The department is apparently correct. The amount of the "relief" due here is determined by applying the "appropriate rate" to that part of the income on which United Kingdom tax is paid or payable. As he is entitled to "relief from earned income," there is a fraction—1/5 of the gross amount—at present on which he does not pay United Kingdom tax. As a result he is left in the position of having to bear a part of the Dominion tax.

## LETTERS, NOTES, ETC.

### Evipan Paralysis?

Dr. F. B. MALLINSON (Anaesthetist to St. John's Hospital, London, S.E.) writes: I notice that whenever a new drug or method is introduced, and in due course weighed in the balance and found not wanting, a certain number of medical men who experience trouble during its use at once write and demonstrate that the trouble must be laid to the door of the particular agent. I read in your issue of November 24th (p. 940) an account of a case of severe peripheral neuritis following evipan anaesthesia for a widespread and grave condition of sepsis. This was at once put down to the evipan (backed, I admit, by the opinion of one of the greatest opponents of the barbiturate group of drugs), and the account labelled "A Case of Evipan Paralysis." Why? Surely a more obvious and rational explanation would be that of a toxic peripheral neuritis due to the intense toxaemia the patient must have suffered. Also it would be an explanation less prejudicial to one of the safest and most important additions to the anaesthetist's armamentarium. I have used evipan in a large number of cases of varying degrees of toxaemia without encountering a similar phenomenon, but at the same time a good many cases have been reported from time to time of severe peripheral neuritis, the result of grave toxaemia.

Dr. G. H. MORRISON (Medical Adviser, Bayer Products Ltd.) writes: In the account of the case of paralysis reported from Singapore which followed the administration of "evipan" sodium anaesthesia, as published in the *Journal* of November 24th (p. 940), there occurs a statement which is obviously made in error. The statement is: "The patient in our case was admittedly very ill and emaciated before operation, but it is in just such cases that the manufacturers [of "evipan" sodium] recommend full doses." If you will refer to the leaflet issued by the manufacturers (a copy of which I enclose) you will find the following: "... it is of course obvious that seriously ill, old, and cachectic patients, and those with circulatory and respiratory disturbances, must be treated with individualized care. ..."

### Maternal Morbidity: Prophylaxis

Dr. WM. HARVEY BENNETT (Bolton) writes: From the evidence put forward at the meeting at the Friends House, Euston Road, on November 6th, it appears that no remedy has yet been found for the deplorable state of affairs pointed out by the late Dr. Ballantyne of Edinburgh twenty years ago. In spite of much ante-natal work the mortality and morbidity of child-bearing women has not been reduced. During the past eight years it has been my practice to invite all women who engage me to attend them during confinement to visit my surgery for radiation by ultra-violet rays at least once a week. The results have been most gratifying, as there have been no complications in any of the cases—about thirty in all. The general condition of the mother has been obviously improved during both pregnancy and puerperium. Calcium and phosphorus metabolism appears to be stimulated—a very important fact for both mother and foetus. There has been no rise of tem-

perature in any case. Those who were previously unable to feed the baby naturally have been enabled to do so. There has not been the slightest evidence of rickets in any of the babies or of osteomalacia in a mother. The dosage of vitamin D has not been considered, but has evidently been sufficient. My investigations have been very incomplete, as my cases are few, and *x* rays are not available to study the bone changes, as Dr. Rollier has studied them at Leysin in his clinics for heliotherapy. The cost of this treatment, excepting for the time spent in administering the light, is negligible, and the cases are under the closest observation from an early date in pregnancy.

### Psychology and Religion

Dr. RICHARD KAY (Hartland, N. Devon) writes: In his exceedingly interesting address on psychology and religion, reported in the *Journal* of November 24th (p. 958), Dr. David Forsyth says "the reason for the almost universal belief in immortality needed accounting for." May I suggest that it is due to the rationalization by primitive man of the instinctive avoidance of danger, common to most slow-breeding animals, into the fear of pain and death. To fear death is to wish to live for ever, which is contrary to experience. But the idea has been born, and the instinct, still active, gives us a strong bias in favour of any argument or experience which suggests that death is not the end of the individual.

### Prevention of "Steaming" Glass

Dr. F. A. E. SILCOCK (Leicester) writes: With reference to the letter on prevention of "steaming" glass, by Dr. J. Roland Murdoch, in your issue of November 24th (p. 976), I desire to state that for very many years now I have used a method that is at once simple, inexpensive, and readily obtainable anywhere for my eyeglasses, surgical mirrors, and so forth. Rub some moist soap over the glass surface and polish it off with a piece of rag again. Ordinary hard household or toilet soap, when it is "tacky"—for example, after one has recently washed one's hands with it—will do. The effect lasts for several hours. I think the soap acts by lowering the surface tension. Other substances will do the same, but soap has obvious advantages.

Dr. J. PERCIVAL BROWN (Bacup) writes: A very old tip used by me for all mirrors, glasses, etc., is to rub on a bit of ordinary hard, dry soap and then polish off. Any mirror is thus also easily prepared for a patient to get close to it to remove blackheads in acne cases. It is useful in a bathroom to prevent steaming of a mirror, etc.

### Inquiry into Contraception

The Acting Secretary of the National Birth Control Association, of which Lord Horder is president, writes: This association has appointed a medical subcommittee consisting of practitioners actively engaged in the teaching of contraception. The object of this committee is to collect, co-ordinate, and from time to time draw up for publication authoritative information on all aspects of contraception for the use of the medical profession. The committee is in consultation with research workers, manufacturers, birth control clinics (both voluntary and under the public health authorities), and doctors engaged in teaching contraceptive methods throughout the country. Although much valuable experience exists, the results of which are at the disposal of the N.B.C.A., the whole subject is still at the research and experimental stage, and it is necessary to be constantly reviewing and reassessing the methods in current use. This committee would therefore be glad to hear from any doctor, clinic, or manufacturer interested in birth control, in order that it may have the fullest sources of information possible. All communications should be addressed to the secretary, National Birth Control Association, 26, Eccleston Street, S.W.1.

### Motor Backache and Neuralgia

Dr. TOM A. WILLIAMS (Bordighera) writes: Pain in the back from motoring is surely due to prolonged stretching of extensor ligaments and muscular attachments, aggravated by the sudden further drag when the body is jolted backwards, forwards, or sideways by bumpings of the car. There are two factors at work. The "close-ribbed" person sags less; hence ligamental and muscular attachments are scarcely stretched. Further, he fits better the usual seat. The long-backed person is farther stretched, and rarely is fitted, especially in a small car. My own remedy is to place a cushion in the small of the back about one foot square and three inches thick, firm enough to support the shoulders and maintain the lumbo-dorsal extensor curve into which it fits, and soft enough to accommodate itself to the space made by the misshape of the back of the seat. In my case this has prevented ache and strain in many a thousand-mile trip over rough roads during the past twenty years. The same device used in bed cures many a back pain reputed to be "neurasthenic" or "imaginary" or "psychological"—so often lightly dismissed by the loosely thinking. Just so, motor backache can be cured only by rest and massage, but can be prevented, even when the seat is ill constructed, by a cushion properly made.

### Varicella and Herpes

Dr. D. JUSTIN DAVIES (Leicester) writes: The close relation between the virus of varicella and herpes zoster is now an accepted fact. An address—I believe by Dr. James Collier—was published some years ago in the *British Medical Journal*, concerning the possible connexion between the viruses of acute infections of the central nervous system and those of varicella and herpes. The following cases are therefore, I think, of some interest. A girl, 10 years of age, suffered five years ago from acute anterior poliomyelitis. The result of this illness seems to be confined to the left lower limb, which is now much smaller and shorter than its fellow. She recently developed varicella. A profuse eruption appeared on the trunk and scalp with numerous spots on the face and limbs (with the exception of the affected limb, which was completely free of spots). Some time ago I attended a boy suffering from encephalitis lethargica, whose mother and father both subsequently developed herpes zoster.

### Medical Register: Office Edition

The Registrar of the General Medical Council writes: Any orders for the Office Edition of the *Medical Register*, 1935, published by the Council at the special price of 10s. a copy, post free, must be received, with a remittance, at the office of the Council, 44, Hallam Street, Portland Place, W.1, not later than December 31st, 1934. The Office Edition differs from the ordinary edition of the *Register* to the extent that it does not contain reprints of the Medical and Dentists Acts and other preliminary matter, and is printed on more inexpensive paper and bound in boards. It includes, however, the same entries relating to registered medical practitioners as are included in the ordinary edition, and is therefore equally serviceable to public authorities and others who find it necessary to ascertain whether particular persons are registered medical practitioners or not. I take the opportunity of stating that the Council also prepares monthly lists of names added to, and removed from, the *Register*, and that particulars of the terms and conditions upon which copies of these lists may be made available can be obtained on application to the office of the Council.

### Corrigenda

Dr. E. HARVEY (Dublin) wishes to make a correction in the report of the meeting of the Royal Academy of Medicine in Ireland on November 2nd, which was supplied to us for publication by the secretary (*Journal*, November 17th, p. 919). Dr. Harvey writes: "Monkeys and pigeons were the experimental animals used by Sir R. McCarrison—not rabbits, as I am made to say. It was in the monkeys, put on a diet of autoclaved rice and fresh butter, that conditions were produced which bear a close correspondence to those found in coeliac disease (or Gee's disease)."

Another apology is due to the shade of Horace. The quotation amended last week (p. 976) should read ". . . *amara lento temperet risu.*"

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An exhibition of microscopes, conducted by Messrs. W. Watson and Sons, Ltd., will be held in the Conference Hall of the Central Hall, Westminster, S.W., from December 10th to 15th inclusive, and will be open from 2.30 p.m. each day.

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### Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 54, 55, 56, 57, 60, and 61 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 58 and 59.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page *280*.